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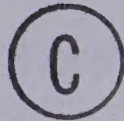




THE UNIVERSITY OF ALBERTA

THE RELATIONSHIP OF SOCIO-ECONOMIC  
STATUS TO GRADE SIX CHILDREN'S  
READING OF PROVERBS

by



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A THESIS

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The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies for acceptance, a thesis entitled "The Relationship of Socio-Economic Status to Grade Six Children's Reading of Proverbs," submitted by Leonard G. Miller in partial fulfilment of the requirements for the degree of Master of Education.





## ABSTRACT

This study investigated the relationship between socio-economic status and grade six students' reading of proverbs.

Subjects used in the study were 100 grade six students enrolled in four elementary schools of the Edmonton Public School System. Fifty students were of low socio-economic status and the other fifty of high socio-economic status. Subjects were randomly selected from the test population. There were equal numbers of boys and girls in each of the two groups.

A proverb test, constructed by the investigator, was administered to the test population. The test is a thirty item multiple choice type of test. Four responses were provided for each item. One constituted the most desirable correct non-literal response, another a correct but not as desirable concrete response, one an incorrect non-literal response and another an incorrect literal response.

Data were subjected to a statistical and an informal analysis.

Statistical analysis of the data revealed that there was no significant difference between the scores obtained by low socio-economic subjects on the proverbs test and scores of high socio-economic status subjects on the same test. There was a significant correlation between the subjects' scores on a reading test and their abstract achievement scores obtained on the proverbs test. Analysis of interaction between variables





other than the criteria score revealed a significant relationship between socio-economic status and intelligence scores of the subjects.

Informal analysis indicated that children of low socio-economic status, who tend to be of low intelligence also, are able to engage in abstract thinking providing the material being employed utilized a concrete and readily visualized base. In addition to the preceding, it was noted that girls within each socio-economic status group scored higher on the test than did the boys suggesting an important area for further study.

As a result of the analysis undertaken regarding data in this study, suggestions were advanced for further investigations. Particular emphasis was given to studies designed to investigate the relationship between socio-economic status, intelligence and students' ability to think. A suggestion was also advanced regarding an investigation of the difference in achievement performance on a proverbs test between boys and girls.





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## TABLE OF CONTENTS

CHAPTER	PAGE
I. AN OVERVIEW . . . . .	1
Statement of the Problem . . . . .	1
Objective of the Study . . . . .	4
Definition of Terms . . . . .	5
Questions . . . . .	7
Hypothesis . . . . .	8
Plan of Research . . . . .	9
Limitations . . . . .	11
Summary . . . . .	12
II. INVESTIGATIONS RELATED TO THE STUDY . . . . .	14
Proverbs . . . . .	14
Definition . . . . .	14
Lineage . . . . .	15
The role they play . . . . .	17
Summary . . . . .	18
Figurative Language . . . . .	19
Defined . . . . .	19
Need for skill to cope with . . . . .	19
Figurative language in elementary grades . .	21
Children's ability to generalize . . . . .	24
The selection of proverbs . . . . .	27



CHAPTER	PAGE
Language, Reading and Proverbs: Their	
Relationship . . . . .	29
Socio-Economic Status . . . . .	32
Influence of Environment on the Development	
of Abilities Important to Reading . . . . .	35
Language . . . . .	36
Mental processes . . . . .	38
Nature of environmental influence . . . . .	40
Review of Studies Examining Relationship	
Between Socio-Economic Status and Specific	
Mental Operations Important to Interpretation	
of Figurative Language . . . . .	42
Summary . . . . .	50
III. THE READING OF PROVERBS . . . . .	53
The Reading Process . . . . .	54
Reading Proverbs . . . . .	61
Summary . . . . .	64
IV. THE EXPERIMENTAL DESIGN . . . . .	65
The Measuring Instruments . . . . .	65
Occupational Class Scale . . . . .	66
<u>Lorge-Thorndike Intelligence Test,</u>	
<u>Level C Form</u> . . . . .	67
<u>Sequential Tests of Educational Progress,</u>	
<u>Reading Form 4A</u> . . . . .	68
<u>Miller's Reading-Proverbs Test</u> . . . . .	69
Pilot Project . . . . .	72





CHAPTER	PAGE
The Student Test Sample . . . . .	79
The Administration and Scoring of the Criterion Test . . . . .	85
Statistical Treatment of Data . . . . .	85
Summary . . . . .	86
V. THE FINDINGS . . . . .	88
Student Achievement: <u>Miller's Reading</u> <u>Proverbs Test</u> . . . . .	88
Statistical Analysis . . . . .	91
Hypothesis I . . . . .	91
Hypothesis II . . . . .	95
Hypothesis III . . . . .	96
Interaction of Variables . . . . .	98
Socio-Economic Status and Sex . . . . .	98
Socio-Economic Status and Intelligence . . . . .	99
Informal Analysis . . . . .	102
Pattern One . . . . .	106
Pattern Two . . . . .	109
Pattern Three . . . . .	111
Summary . . . . .	113
VI. CONCLUSION . . . . .	116
Summary . . . . .	116
Findings and Conclusions . . . . .	117
Hypothesis I . . . . .	117
Hypothesis II . . . . .	118
Hypothesis III . . . . .	118





CHAPTER	PAGE
Interaction . . . . .	119
Informal analysis . . . . .	120
Implications . . . . .	123
Limitations . . . . .	124
Suggestions for Further Research . . . . .	126
Concluding Statement . . . . .	128



## LIST OF TABLES

TABLE		PAGE
I.	Frequency Distribution Based on Diffucilty Index of Sixty Items used in Pilot Study Test . . . .	76 .
II.	Frequency Distribution Based on Validity Index of Sixty Items used in Pilot Study Test . . . .	76
III.	Comparison of Frequency Distributions Based on the Difficulty Index and Validity Index between Sixty Items in the Test used in the Pilot Project and Thirty Items in the <u>Proverbs</u> <u>Test</u> used in the study . . . . .	78
IV.	Frequency Distribution of the Test Sample by SES, Sex, Occupational Class, Reading Achievement and Intelligence . . . . .	81
V.	Frequency Distribution of the Test Population by SES, Sex, Reading Achievement and Intelligence . . . . .	83
VI.	Frequency Distribution of the Test Sample by SES, Sex and the Abstract, Concrete and Total Scores Achieved by Subjects on the <u>Proverbs</u> <u>Test</u> . . . . .	89
VII.	Frequency Distribution of the Test Population by SES, Sex and the Abstract, Concrete and Total Scores Achieved by Subjects on the <u>Proverbs</u> <u>Test</u> . . . . .	92





TABLE	PAGE
VIII. Significance of Relationship between SES and Sex, SES and Intelligence and SES and the <u>Proverbs</u> <u>Test</u> , using Subjects' Abstract and Concrete Scores as Criteria . . . . .	94
IX. Pearson Product-Moment Correlations Between SES, Sex and Subjects' Scores on the <u>Lorge-</u> <u>Thorndike Test</u> , the <u>Proverbs Test</u> and <u>STEP</u> . . . . .	97
X. Total Number of Each Response Selected by Boys and Girls of Differing SES on the <u>Proverbs</u> <u>Test</u> as Related to Total Responses Possible . .	104
XI. Percentage Distribution of Choices by SES made on Selected Items from the <u>Proverbs Test</u> Based on Three Patterns . . . . .	107





## CHAPTER I

### AN OVERVIEW

#### STATEMENT OF THE PROBLEM

Recent investigations have revealed that authors of stories and books written for upper elementary grades employ a substantial quantity of figurative language (Harris, 1958; Mallinson, 1950; Sloan, 1959). Implicit in this inclusion of non-literal expressions is the assumption that children in upper elementary schools are capable of making and using the generalizations required to obtain meaning from these expressions. The results of studies carried out by Piaget (1928) and Watt (1944) appear to support the contention that younger children tend to perceive words as relaying concrete ideas and do not, as a rule, generalize. Although the age at which this type of behavior terminates is not precisely established, research studies carried out by Groesbeck (1961), Orton (1966), and Flaum (1945) indicate that children at the upper elementary level are capable of generalizing from the concrete to the abstract. It is this facility to generalize that enables one to make meaningful interpretations of proverbs (Watson, 1921), providing, of course, that the individual undertaking the interpretations has an adequate experiential background to draw upon. This should not be construed to mean that an "adequate experiential background" is the only necessity, since intelligence undoubtedly plays a substantial role in facilitating understanding of proverbs.



It should be pointed out that a concrete interpretation of a proverb is a meaningful one and is, indeed, an essential prelude to the task of making a generalization to other situations. However, meaningful, as used in the preceding paragraph, refers to the intended association of the meaning and events presented in the proverb with happening and events unrelated to those in the proverb. For example, saying to a youngster who has just broken a window "don't cry over spilt milk" requires that he be able to associate the events of his involvement with the unrelated events of the proverb.

The use of figurative language as a literary device at one time accounted for about 10 per cent of printed literature (Gill, 1954). However, there is reason to believe that two recent occurrences may increase this figure to as high as 15 or 20 per cent. The first of these events is the explosive advances of modern technology, both in the exploration of outer space and the oceans' depths, which has forced writers to utilize more frequently the expressive powers of literary devices such as the metaphor and simile in describing the never before experienced phenomenon of these investigations. Secondly, there is evidence that contemporary literary figures have developed a passion for the use of small words; that is, words containing few letters and syllables which inevitably prompts them to make fairly extensive use of figurative language in order to adequately express their thoughts (Gill, 1954). Figurative language is employed, to a substantial degree, in proverbs and, like all other printed material that makes use of non-literal language,





presents to the reader a task involving something more than the often difficult literal understanding of word meanings.

Knipp (1951, p. 290) tells us that "... simple recognition of words is not sufficient; children at all levels must be aware of the extensiveness of meaning of words and depth of vividness of meanings...." This serves to point out the importance to the child, in his struggle for maturity in reading comprehension, of not only facility in differentiating between the concrete and the abstract, but as well, skills required to interpret adequately literal and non-literal language. Inability to carry out these functions can result in a breakdown of the interpretive process that leads to reading disability.

Since the acquisition of skills in processing non-literal expressions is required for mature functioning within all areas involving reading, and since interpretative ability, the major component of this processing, relies heavily upon the child's background of experiences (Artley, 1951) the very compelling question arises as to whether the impoverished environment, as gauged by middle-class standards of children in poor socio-economic areas is related in any way to their ability to function adequately in reading content utilizing figurative language. More specifically, the question arises as to whether a relationship exists between children's socio-economic status and their ability to understand proverbs.

Students at a grade six level were chosen for investigation in this study since it had already been established in a previous study carried out in a large urban public school



system by Orton (1966) that children in grade six were able, in general, to obtain the non-literal meaning of proverbs. Such a conclusion paves the way for a further investigation of grade six children's understandings of proverbs with the addition of another dimension; that of the relationships between a child's socio-economic level and his understanding of proverbs.

#### OBJECTIVE OF THE STUDY

The purpose of this study was to investigate whether the socio-economic status of children at the grade six level was related to their understanding of proverbs they were required to read. More specifically, this study undertook to determine whether grade six children from a low socio-economic environment differ significantly in their ability to extract the preferred non-literal meaning of proverbs in print, from those grade six children who reside in high socio-economic areas.

In addition to a statistical analysis of data collected for the study to make a quantitative measure of differences that may exist between the two groups, an informal analysis was also undertaken to determine in what way the responses selected by children from both socio-economic levels were similar or different. For example: Did the children from high socio-economic areas make the same kinds of errors on Miller's Reading-Proverbs Test as those committed by children from low socio-economic levels?





## DEFINITION OF TERMS

The following terms are defined as they are used in this study.

Proverbs. A proverb is a saying that may have originated in any one or more of numerous cultures (i.e. English, German) and has been committed to writing, proclaiming some recognized truth or shrewd observation about practical life expressed in non-literal terms, and handed down by oral tradition (Hornby, 1957; Thrall, 1960). For example: When a writer says, "Make hay while the sun shines", it is not likely that his intended meaning be literally that the hay should be cut in sunny weather (although this initial interpretation is essential), but rather that one should get things done when they are ready to be done. The former is considered a literal interpretation of the proverb and the latter a non-literal interpretation.

Non-literal Language. This type of language consists of words that are used out of ordinary locution as a mode of expression to suggest a picture or an image or to secure some other special effect. For the purposes of this study, non-literal language is figurative language and is used synonymously with figurative language in print.

Non-literal Responses. Responses on Miller's Reading-Proverbs Test that present the abstract meaning of the proverb.

Literal Responses. Those responses on Miller's Reading-Proverbs Test which present the concrete interpretation of the proverb.



Total Proverb Score. This score represents the achievement raw score earned by children on Miller's Reading-Proverbs Test and was obtained by totalling the subject's abstract and concrete scores.

Abstract Score. This score represents the achievement abstract score earned by children on Miller's Reading-Proverbs Test and was obtained by totalling all the points received for each correct non-literal response (rated at two points each) selected by a student.

Concrete Score. This score represents the achievement concrete score earned by children on Miller's Reading-Proverbs Test and was obtained by totalling all the points received for each correct literal response (rated at one point each) selected by a student.

Low Socio-economic Status. Those children whose rating on Blishen's Occupational Class Scale placed them in class Five, Six, or Seven were selected as children representative of low socio-economic status and hereafter referred to as low SES. Where both parents in a family were working, the rating of both was totaled and divided by two to obtain a composite rating.

High Socio-economic Status. Those children whose rating on the Blishen Occupational Class Scale placed them in class One and Two were selected as children representative of high socio-economic status and hereafter referred to as high SES. Where both parents in a family were working, the rating of both was totaled and divided by two to obtain a composite rating.





## QUESTIONS

There were three questions of basic concern to the study. First of all, consideration was given to the total score obtained by students of the Miller's Reading-Proverbs Test which consisted of the combined abstract and concrete scores. This particular score will provide data that should indicate the extent of their ability to obtain meaning from groups of words called proverbs whether it be literal or non-literal since one of the responses provided for each test item represented a correct, though not as desirable, literal meaning for each particular proverb. More important, the analysis will indicate whether a relationship exists between the students' total score and their socio-economic status and if such a relationship is a significant one. Is there a significant relationship between the total scores on the Miller's-Reading-Proverbs Test obtained by children from low socio-economic regions and those obtained by children residing in high socio-economic areas?

The analysis of the abstract scores obtained by the children in the study and the relationship of these scores to their socio-economic status constituted the second, and the major, area of concern to this study. The extent to which children's ability to extract the desired non-literal meaning of the proverb is related to their social and economic background, in the particular regions investigated, should be revealed by the results obtained from a statistical analysis of the data. Is there a significant relationship between the abstract scores obtained on Miller's Reading-Proverbs Test by those children



of high socio-economic status?

Finally, since it is reasonable to assume that reading ability would play an important role in a test of this nature, it was considered desirable to determine whether there was a significant correlation between the abstract scores obtained by children on Miller's Reading-Proverbs Test and the scores obtained by the same children on a reading test. In this case, the Sequential Tests of Educational Progress, Reading Form 4A was used. Is there a significant correlation between the abstract scores the children in the study obtained on Miller's Reading-Proverbs Test and the scores they obtained on a reading test?

#### HYPOTHESIS

In analyzing the data collected to answer the preceding questions, three hypotheses will be statistically tested, they are as follows:

1. There will be no significant differences in the total reading-proverb scores obtained on Miller's Reading-Proverbs Test by grade six children from the low socio-economic group and the scores of grade six children from the upper socio-economic group when adjustments have been made for sex.
2. There will be no significant differences in abstract reading-proverb scores obtained on the Miller's Reading-Proverbs Test by grade six children in the lower socio-economic group and





the scores of grade six children from the upper socio-economic group when adjustments have been made for sex.

3. There will be no significant correlation between the reading scores obtained by grade six children on the Sequential Tests of Educational Progress, Reading Form 4A and the abstract scores obtained by the same children on Miller's Reading-Proverbs Test.

#### PLAN OF THE RESEARCH

This investigation was carried out in four elementary schools of a large urban school system, the Edmonton Public School System, Edmonton, Alberta during the latter part of June. All the children in grade six from the four schools, comprising a total of 179 pupils, made up the total test population.

The test, a thirty item multiple choice instrument, used as criterion in this study, is named Miller's Reading-Proverbs Test and was constructed by the investigator. A pilot study preceded the final compilation of Miller's Reading-Proverb's Test during which a sixty item test was administered to 161 pupils who were selected to assure a fairly equal representation of children of low and high socio-economic status. To facilitate the specific investigation of this study, each proverb was provided with four randomly positioned responses; one, the preferred non-literal interpretation, another, a less preferred literal interpretation, and an incorrect, and often opposite, distractor for each of the preceding. By "opposite" is meant



the inclusion within the incorrect response of the same referents as those employed in the correct response but used in such a manner as to present a false idea. "You can't cross a bridge before getting to it" illustrates a correct response while "It is easy to cross a bridge before getting to it" provides an example of an incorrect response. The test was administered by the investigator to all 179 subjects in the test population. Answer sheets used by the pupils were scored by the IBM 1230 of the Division of Educational Research Services at the University of Alberta.

A table of random numbers was used to select the 100 pupils in the test sample of the study. The selection was based on socio-economic status and sex of pupils from the upper socio-economic level, half boys and half girls, and the same number and distribution of pupils from the lower socio-economic level.

Data collected for the study included the numerical rating allocated to parental occupation as determined by Blishen's Occupational Class Scale, full scale scores obtained by the pupils on the Large-Thorndike Intelligence Test, Level C Form the pupil's raw score obtained on the Sequential Test of Educational Progress, Reading Form 4A, and the total and abstract scores obtained by the pupils on Miller's Reading-Proverbs Test.

Analysis of the data using Multiple Linear Regression and the Pearson Product-Moment Correlation analysis, was carried out by the University of Alberta Computing Centre using programs





supplied by the Division of Educational Research Services at the University of Alberta. For the purpose of this study, the .05 level of confidence was determined as the level at which the results would be considered significant.

In addition, the data were also subjected to an informal analysis to examine relationships that may have occurred between socio-economic status and the kinds of choices made.

### LIMITATIONS

There are some basic limitations to any conclusions that might be indicated by the results of the study.

First of all, the proverbs chosen for the test were selected by the investigator after considerable informal discussion with teachers and numerous individuals outside the teaching profession. In addition to this, the accompanying responses were constructed by the investigator with his wife's assistance. Because of this, it is quite conceivable that a middle-class bias may have played an important role in the test that finally emerged.

Secondly, there is reason to believe that rapid advances, technological or otherwise in the business and industrial sector of our economy, may have resulted in obsolescence, to a degree, of some of the occupational ratings used in the study to determine the socio-economic status of children. It is certainly true that the proliferation of new and varying occupations, brought on by a progressing and expanding economy, presented numerous problems of equating "new occupations" with those presented in the scale.



Thirdly, when undertaking to examine socio-economic status in relationship to other items, the investigator is faced with a variable that is impure, consisting of other ingredients. For example: One of the factors involved in the development of a socio-economic scale, and in particular, the socio-economic scale used in this study, is education. This leads one to conclude that intelligence probably plays a role, how important one cannot be sure, in determining an individual's socio-economic status. If any one of the specific ingredients that make up a socio-economic scale has a significant influence on placement on this scale, then concern with what statistics are really measuring is warranted. That is, if the results are significant, can it be said that socio-economic status per se was the cause.

#### SUMMARY

The apparent increase in the non-literal and figurative content of stories and books written for children in elementary school has raised a concern regarding the effect such an increase would have upon children of lower socio-economic status. This concern stems from reports of studies indicating that children's interpretive ability in the area of reading relies heavily upon their background of experiences. Because of this concern, studies are required to investigate whether or not a relationship does exist between a child's socio-economic status and his ability to deal adequately with figurative language; in this particular instance, with proverbs.





An apparent paucity of research in this particular area would seem to point out the need for more studies to be undertaken to investigate thoroughly any relationships that might exist between children's socio-economic status and their abilities to cope adequately with figurative, abstract reading materials. It is to this end that the present study was undertaken. Specifically, it is proposed to undertake an investigation to determine whether a relationship does exist between grade six children's capacity to read non-literal language, in the form of written proverbs, and their socio-economic level, and the nature of any relationships that may be shown to exist.



## CHAPTER II

### INVESTIGATIONS RELATED TO THE STUDY

Chapter II has as its purpose the following:

1. An investigation of proverbs to provide background for the study.
2. An examination of figurative language, the language of the proverb, in relation to writers' and students' needs.
3. An examination of the relation among oral language, proverbs, and written language.
4. A consideration of criteria which were used to determine socio-economic status in this study.
5. A consideration of the influence of environment on the development of abilities important in learning to read.
6. An examination of the relationship between socio-economic status and specific mental operations important to the proper interpretation of figurative language.

### PROVERBS

#### Definition

A definition for proverbs is provided in Chapter I to present a basis for common understanding between the writer and reader of this study. This investigator finds himself in agreement with Taylor (1962) who suggests that any attempt to develop a viable and generally acceptable definition for proverbs is an exercise





in futility. However, it is noteworthy that agreement may be found in the idea that proverbs basically consist of figurative language employing metaphor, simile or other similar literary devices (Champion, 1938; Foss, 1949; Taylor, 1962; Westermarck, 1938).

### Lineage

Historically, proverbs date back many centuries. Champion (1938), in the introduction to his book containing a collection of the World's proverbs, makes reference to proverbs that date back as far as 3700 B.C. Edwin Loeb (1952, p. 101) discusses the proverb in relation to the stages in man's intellectual progress and places its origin on a developmental continuum in conjunction with the agriculturists or breeders of domestic animals and points out that the proverb was "...a distinct possession of cattle raising people of the Old World...." Unlike primitive hunters and fishers, these people possess domesticated chattels which increases under established conditions, required protection and provided a marketable commodity. This type of societal structure demanded the establishment of ethics and laws easily perpetuated in an oral society in order to assure the groups continued and orderly development. The proverb fulfilled this role admirably in its simple application of obvious truths to particular situations. This may be illustrated by an example Loeb (1952, p. 102) gives of a legal proverb of an African tribe: "A person should not shoot a bird resting on his own head" which properly applied means that one should not testify against a relative for fear of harming oneself.



It would appear to be a singularly futile task to determine the precise moment proverbs came to being. Furthermore, it is of no consequence since it will suffice to show that the proverb's lineage stems back centuries ago. A valid argument for their retention and perpetuation in modern times may be found in the fact that many of these proverbs have distilled in them the universal truths of life which are no different today than they were thousands of years ago.

It is interesting to note that the presence of proverbs in oral and written tradition appears to be universal and that they differ throughout the world only in the way in which they are rendered (Champion, 1938; Giles, 1938; Jones, 1938). For example: An English proverb, "Fresh fish and new-come guests smell in three days" has its Mohammedan counterpart in "One day a guest, two days a guest, the third day a nuisance". There would appear to be a reasonable explanation for this apparent universality of proverbs.

As mentioned in an earlier paragraph, Loeb (1952) discusses the role proverbs play in the intellectual advancement of primitive peoples. He points out that the use of proverbs in primitive cultures occurs prior to the pre-literal level and implies that only people who are in the process of advancing from the primitive stage to the printed word and an advanced intellectual level (and there are many who are still in the primitive stage), which might be considered the beginnings of the literate era, pass through the proverb stage. If this be the case, we then have a useful and logical reason for the presence





of proverbs in the oral and written tradition of most peoples of the world. We also have here the basis of support for reasons, advanced further on, as to why people of low socio-economic status may be as competent with proverbs as are those of high SES.

### The role they play

Proverbs appear to play an important role in the life of people who are in the pre-literate era in that they serve as the storehouse for their philosophy, ethics, law and religion (Loeb, 1952). Loeb (1952) makes a further addition to the preceding by identifying the important area of love as having a close association with proverbs. The proverbs then served as the media by which a people's tradition was preserved with a dependence upon oral transmission for sustenance.

It is of equal interest to note that many, who are knowledgeable in the realm of proverbs, allude to proverbs being the child of the common people (Champion, 1938; Jones, 1938; Saurat, 1938; Taylor, 1962) who might be said to be at the lower end of the intellectual continuum of any group of people considered to form a society. Over and over again this particular theme emerges in the writings pointing to the common people, the peasants and the common folk who are on the bottom rung of the socio-economic ladder as those who are the chief architects of proverbs.

If the common folk were the "chief architects of proverbs" it is entirely possible that the common people in each succeeding generation, up to the present, were and are the instrument of the proverbs perpetuation. This being the case, it would seem very probable that today's common people, those of low SES,



possess an understanding of proverbs.

In terms of levels of society, one might draw a parallel between those members in today's communities, who would be on the lowest levels of a socio-economic scale, with those members comprising the common people or peasantry of long ago. Even though present day members of low SES may be able to read to some degree, the need for well developed reading ability in today's society is so great that many of these people could be classified as borderline literates. That is, in terms of Loeb's (1952) and Riesman's (1964) discussions of the development of a civilization, these people are at level of literacy in our society which is comparable to the pre-literate stage of development during which proverbs play an important role.

One should not conclude from the preceding that people who possess a higher degree of intellect are unable to formulate or understand proverbs. On the contrary they are well able to interpret proverbs or to use them if necessary. They do, however, display a tendency to resort to what might be considered to be higher forms of literary activities.

### Summary

A review of what has preceded reveals the emergence of two important factors: (1) proverbs serve as the storehouse for the oral preservation of tradition of people who are at the pre-literate level of their intellectual development, and (2) proverbs tend to be a mode of expression that is the mark of the common folk. These two factors present some far reaching implications for this study. For example: If what has been





stated above is true, is it then not likely that children from low socio-economic environs (the common folk), who might be considered, in terms of intellectual development, just beyond the pre-literate stage, will be able to cope successfully with proverbial type material? Will the performance on a proverb test of children of high socio-economic status be below, equal, or superior to children of low socio-economic status? Is a proverb test a valid type of instrument to use in measuring differences in ability to interpret figurative language between two groups that are at a level of intellectual development that is beyond the pre-literate stage, regardless of the substantial spread in the measured intellectual capacity of these two groups?

## FIGURATIVE LANGUAGE

### Defined

In this study, figurative and non-literal language are used synonymously and refer to words that are used out of ordinary locution as a mode of expression to suggest a picture or an image or to secure some other special effect such as that to be found in proverbs.

### Need for skill to cope with figurative language

Few are those who have not had, at one time or another, to rely on strength, clarity and emotive qualities of figurative language for the meaningful transmission of the content of important occurrences. When the functional quality of literal language is found to be sterile and unrewarding, in attempting to



portray for others the passing events of life, man seems to turn, in an almost natural fashion, to the use of figurative language. Walpole (1941, p. 239) assures us that "our knowledge about the shifts and ambiguities of sense, the powers of metaphor and abstraction, the emotional implications, and the other stratagem and devices of language will help us to read and write better,...."

As mentioned in Chapter I, there appears to be mounting evidence that the percentage of non-literal content in present day reading material is increasing. Two reasons were advanced to explain this apparent increase. The first reason given was man's almost explosive advances in technology which has made it possible for him to explore space and the oceans' depths. How else might these explorers describe for the millions of interested laymen the scenes viewed in their explorations of the unknown and the sensation and feelings man has never before experienced. Try and imagine how a purely literal explanation of the following episode might sound and consider how ineffective such a rendition of this event would be; an event that should be, for the reader, a facsimile of the author's experiences. J. Y. Cousteau, in his Silent World aptly uses figurative language to provide the reader with a vivid portrayal of the physical sensations experienced during an exploration of the oceans' depths in a skin diving suit:

Everything in the world was thick. My fingers were sausages. My tongue was a tennis ball.... The air was syrup. The water jellied around me as though I were smothered in aspec.... (Gill, 1954, p. 298)





How else could he have re-enacted this adventure for the reader so that the precise feelings he experienced became known to his audience?

The second phenomena, referred to above, is the apparent tendency of modern day literary figures to avoid the use of big words. Gill (1954) tells us that even noted authors such as Steinbeck and Hemingway have abandoned the use of "big" words. Needless to say, it can be seen that by restricting themselves to such a pattern, authors are limiting, to a considerable extent, the number of words at their disposal; words that are used in efforts to faithfully portray the events of life for the expectant reader. In overcoming this decided deficit, they must resort to the use of literary techniques such as that of figurative language; a technique that permits a flexibility and quality of presentation not available in strict literal usage. There is little doubt, as Walpole (1941, p. 156) claims, that "miracles can be worked with a couple of thousand words.... We are weak, not because our vocabulary is inadequate, but because we are stale in the way we use it."

#### Figurative language in elementary grades

The extent to which figurative language is used in elementary grades, in reading and other subjects, does not reveal itself until subjected to a more thorough study. Groesbeck (1962, p. 86) found that "...a third grade pupil will encounter, in one school term, 582 figurative expressions in his basal reading and social studies textbook, a fourth grade pupil, 837 and a fifth grader, 1,337." Although she goes on





to state that "some he will be familiar with from common usage," one must reflect on this statement since it implies an assumption that may not be entirely valid, particularly if consideration is being given to the relationships that exist between environment and language development in children. In addition to this, being "familiar with" figurative language does not necessarily lead to it being understood.

A specific illustration of the use of figurative language in elementary reading material is found in the following excerpt taken from a grade six reader:

Once, Chuck's eyes strayed to the great emptiness just a foot off the path. A clammy shiver of fear held him and his head swam before he desperately swept his eyes back to the trail. Quite suddenly he felt the ground beneath him level off.

(Stauffer et al, 1961, p. 213)

At the grade five level an example of the use of picture language to present a more vivid picture of scenes and events is found in a story by Jakes (1963, p. 215) in the grade five book in the Sheldon Basic Reading Series. In this story, Jakes, in describing a very hot day on the cattle trail writes that "It was about three o'clock in the afternoon, the mid-day heat was dying slowly as the sun dropped into the west,...."

It is interesting to note that the use of figurative language is not restricted entirely to the contents of books in reading per se. Not infrequently do you find that this literary technique is employed in attempts to provide satisfying word pictures of geographical locations, historical occasions or a scientific discovery. What better way to describe the physical features of Switzerland as "'The Land of the Sky is



like that paper, crumpled and wrinkled with mountains'"

(McConnell and Watson, 1948, p. 107), the peace brought by the rule of Augustus during which "...none fear invasion; every man closes a peaceful day on his native hills, trains his vines..." (Wedgwood and Higham, 1952, p. 136), or Einstein's formulation of the Theory of Relativity during which "his mind reached out to the remotest part of the universe..."

(Burlingame, 1960, p. 165). More and more one sees the increasing willingness of authors to give richer and deeper meanings to their expositions of life, real and otherwise, through the use of figurative language. One unfortunate consequence of the use of figurative language in materials requiring reading is the adverse effect such presentations have on those children who are already engaged in an unrewarding struggle to overcome deficiency of reading skills that are even basic to the adequate comprehension of purely literal content. Consider the problems this creates for the poor reader who is experiencing difficulty in decoding even the simplest of words.

Intimately related to the matter of non-literal language is the fact "...that many common English words have several meanings and some have numerous meanings" (Knipp, 1951, p. 290). Walpole (1941, p. 145) claims that "...we use every one of our words metaphorically as well as literally. Our most basic words, like 'leg', 'foot', 'give', 'in', 'take' are used metaphorically more often than not,...." One need only take a "day off" and analyse the word content of those we come in contact with, as well as our own expressions, to obtain firsthand knowledge





that words "...have many faces and colors, many moods and purposes" (Cohler, 1954; p. 85). In the proverb we find, as mentioned earlier, the use of metaphor, simile, and other devices of figurative speech to give meaning that transcends the literal content of the expression. Words, individually and collectively, take on different meanings governed by the situations to which the proverb is applied. Consider the proverb "a bird in the hand is worth two in the bush." This expression, when used in relation to a situation in which a man who has won some money and is intent on a risky investment, results in "bird" taking on the meaning of money and "bush" becoming the proposed investment. Lee (1941) states that we are indeed fortunate that words take on various meanings and purposes since relatively few words are available to represent an infinity of objects, situations and the like. However, it would be wise to remember that this situation can create for the unwary and unprepared child a labyrinth of pitfalls in his search for understanding.

#### Childrens' ability to generalize

Studies which have been carried out to determine at what age level children are capable of applying the kinds of generalizations required to accommodate figurative language are far from conclusive.

There are those who are well versed in the field of child development who claim that children in lower grades are not, as a rule, able to generalize (Feifel and Lorge, 1957; Gill, 1954; Piaget, 1928; Watts, 1944). Feifel and Lorge (1957) undertook a study in which children between six and fourteen



years of age were required to perform on a vocabulary test. The results revealed that children who are at the lower intermediate and primary grades have a tendency to adhere to the concrete meaning and do not generalize. Piaget (1951, p. 238), in discussing a particular encounter with a youngster, concluded that the child's reasoning involves individual cases without endeavoring to generalize and that his inability to generalize is "...because he can handle neither the logic of relations nor the elementary operation of the logic of classes, ...both of which are themselves dependent upon the logic of relations." In specific reference to childrens' ability to match up proverbs with corresponding sentences presented in a matching situation, he found that up to the ages of eleven and twelve the children responded by selecting the corresponding sentences in a random manner (p. 231). Watts (1941, p. 213) claims that when dealing with proverbs "...not every child, even at the age of eleven or more, can see anything but a plain literal meaning in such statements...." That is, they appear unable to see that the proverbial statement has a much wider application than that depicted in the statement.

In an analysis of proverbial interpretations made by children, ages seven to twelve, and adults, ages fourteen to sixty-seven, Richardson and Church (1959) found that very few children were able to respond with correct interpretations. It should be noted that in this particular study, the subjects were not provided with corresponding sentences or multiple choices and thus were required to formulate and verbalize their interpretations.





In contrast to the above, we find that there are those who advance and support the theory that children are constantly engaged in the types of activities that require facility in generalizing (Dewey, 1910; Russell, 1956). Russell (1956) discusses, in a critical fashion, Piaget's dogmatic adherence to stages of thinking and makes particular reference to what Piaget calls the pre-logical stage, claiming that the child from very early years has been conceptually involved with his environment through the employment of discriminative, abstracting and generalizing ability. Curti (1956, p. 177), in analyzing studies undertaken by Welch and Lang to examine generalization ability and concept formation in children, concluded that the results obtained point to an ability on the part of children to "...generalize and form abstract concepts." In 1936, Croxton (1936) undertook an experiment to determine at what grade level children display an ability to function in the area of generalization. The results of this study revealed "...that many children in the higher primary, the intermediate and the junior high school are capable of generalizing," (p. 634). More recently, studies by Groesbeck (1961) and Orton (1966), undertook to investigate elementary school children's ability to deal with figurative or non-literal language, a task requiring facility in generalizing, obtained results that tended to support Croxton's finding that children in upper elementary school are functionally able to carry on such activities.

Groesbeck's study (1961) was primarily concerned with the ability of third, fourth and fifth grade pupils to transfer





training they received specifically in the interpretation of figurative language. The subjects selected were from these classrooms in each of two public schools. The subjects were pre-tested in the area of reading, vocabulary, figurative language and mental ability. All the children making up the experimental group were subjected to an intensive program during which they were involved in ten twenty minute instructional periods in the interpretation of figurative language. Following this, a post-test in the interpretation of figurative language was administered to both the experimental and control group. The results indicated significant gains in ability to interpret figurative language on the part of those who received specific instruction in this area.

Orton (1966) sought to determine whether grade six pupils were able to interpret proverbs. The random sample of subjects were chosen from grade six classes in the Edmonton Public School System. Equal numbers of boys and girls were included in each of the three groups, as well as an equal representation of high, average and low intelligence. All of the groups A, B and C, were given a multiple choice test; group A, an individually administered oral multiple choice test; group B, a written subjective test; and group C, an oral subjective test. A statistical analysis of the results showed a significant difference in their abstract and concrete interpretation of proverbs favoring the abstract.

#### The selection of proverbs

Proverbs were chosen for use in this study because they



have been used by others as a means of measuring the 'concreteness' or 'abstractness' of an individual's thinking process (Gorham and Elmore, 1957; Orton, 1966; Pikas, 1966). Pikas (1966, p. 82) refers to the proverb as "...one of the most promising areas for further investigations in 'abstractness'." The results of studies discussed to this point do not provide conclusive proof as to whether or not pupils at the upper elementary grades are capable of interpreting proverbs. It should be kept in mind that the studies carried out by Piaget (1928) which led to the conclusion that children up to eleven years of age were incapable of making non-literal interpretations were carried out using a test format that was quite different than that used by those who obtained positive results. Piaget used a matching type of test in obtaining the results he did. That is, the child was presented with a set of proverbs and then provided with a correct statement for each proverb, but with the statements being proffered in a jumbled fashion. The subject was then required to make a correct match between a proverb and its statement. It is possible that this type of test structure could have increased the difficulty of the task.

Gorham (1956) in discussing the range of applicability of a proverb test, refers to findings that even pupils at the fifth grade were able to interpret proverbs quite readily. Orton's study (1966) indicated that children in grade six possessed the ability to obtain the non-literal meaning of the proverb.





## LANGUAGE, READING AND PROVERBS:

## THEIR RELATIONSHIP

Implicit to this point has been the view that language and reading are inextricably woven together. Although this may appear to be an obvious fact, it would seem wise to take time out to reflect on the actuality of what appears to be an obvious conclusion.

Language has its roots in man's capacity to transcend the confinement of his own private consciousness by symbolizing ideas in a systematic, organized fashion in order to give substance to his needs, feelings, aspirations and knowledge of the world around him. This system, called language, permits man to establish a functional intellectual structure wrought from concepts that evolve from a continuous interaction with his environment. It also permits man to externalize in either oral or written form that which has transpired internally. Carroll (1964, p. 101) speaks of language as "...a socially institutionalized sign system. It is the result of centuries of gradual development and change at the hands of many generations of speakers, but at any one point of history, it exists as a set of patterns of behavior learned and exploited in varying degrees by each member of the speech community in which it is used." More specifically, Sapir (1967, pp. 75-76) refers to language as "...the most explicit type of communicative behavior that we know of... it consists in every case known to us of an absolutely complete referential apparatus of phonetic symbols which have the property of locating every known social referent, including all



the recognized data of perception which the society that it serves carries in its tradition."

We are told that the primary function of language is to serve as an instrument of communication (Sapir, 1967). In order to carry out this function, there must be involvement and interaction between the extremities of a reversible communications continuum; transmission and reception. Goodman (1963, p. 291) says that "...oral language is the language. It is man-made and continuously changed by man to meet his communicative needs and whims." Riesman (1964) tells us that the spoken word was the only word in the beginning, and refers to this period as the preliterate period. He discusses the transition from the preliterate to the literate period and points to the proverb as bridging the gap between the oral and written stages of history. The proverb has its roots in the need of the more advanced societal groups to have some means of preserving their laws, wisdom and ethics. Riesman (1964, p. 423) refers to the proverb as "...the most literate, so to speak, of the pre-literate styles of speech...."

It is the oral language which is translated to written symbol which, in turn, serves as the media utilized in the reading process. Goodman (1963) contends that not only is it possible to construct the reading curriculum on a solid foundation of knowledge about language, but that it is necessary for the development of better readers in our schools. Hildreth (1948, p. 538) points out that "language, or English and reading are related in two ways; first, comprehension and speech are the foundation for learning to read printed word symbols;





second, reading facilitates improvement in oral and written work. Reading experience can be used to develop language sense and to give practice in seeing and using language correctly."

If, as it has been pointed out in a previous paragraph, the proverb resulted from a need to bridge the transition between the oral and written periods of history, the question arises as to the reason for its presence in our language today. Although the passing centuries have witnessed an ever increasing flow of printed materials to meet the needs of communication, oral involvement has continued to claim a substantial, though diminishing, portion of an individual's daily encounters with other members of his society. These elements, coupled with the uniqueness of the proverb in its succinct and dramatic presentation of what has been referred to as the universal truths, truths that are just as relevant for contemporary societies as they were for past centuries, undoubtedly contributed to the perpetuation of the proverb. It is likely that their survival is also due, in part, to those concerned scholars who, through the centuries, have expended time and energy in gathering and recording the proverbs in order to assure the perpetuation of the truths they expressed through the years to come. Although the proverb is assured earthly immortality through the written record, it would appear that the proverb, though to a degree dependent on the printed word for circulation, is, in general, passed on through oral transmission.

Although there appears to be an inseparable bond between language and reading, it would be erroneous to conclude that





they are synonymous. Reading involves something more than language. It involves the need to engage in visual perception and the ability to relate the printed symbol to its counterpart should it be in one's oral repertoire. It involves the knowledge and use of word attack skills to assist in the adequate decoding of what is being read. It involves the implementation of skills that are required in apprehending meaning from printed words, individually and collectively. As described in Chapter II, the reading of non-literal materials, and in particular the proverb calls on the reader to transcend the literal bounds of words through the manipulation of concepts related to situations and acquire the symbolic meaning. Oral and written language serves as the foundation and media upon which reading is built.

#### SOCIO-ECONOMIC STATUS

The concept of socio-economic status, such as that presented by Blishen (1961), would appear to consist of two basic ingredients; years of formal education and income. Although other factors, such as the number of books in the home, the kind of dwelling occupied, and the area in which the house is located are frequently used, the two factors which would appear to be most influential, and undoubtedly, in general, determine the status of the criteria mentioned above, are those of education and income.

An examination of the possible situations that might be generated by using education and income as the basic criteria in



establishing socio-economic status reveals the possibility of discrepancies occurring within any social level. For example: Consider an individual who has little or no formal education, yet through the successful manipulation of natural business acumen, accumulates substantial wealth. Specifically, let us say a carpenter decides to become a general contractor and subsequently is a financial success. His financial ability to establish himself in a community of upper social-economic status does not, in any way, assure his acceptance into that community as a bona fide member, nor does it automatically assure him of all the social graces and intellectual attributes that are considered to be qualities possessed by members of this social economic group. And, more specifically, if, prior to his movement, he read poorly and found it an unrewarding involvement, it is highly improbable that a change in status will result in a marked change of ability in and satisfaction from reading. Particularly when the printed material suitable to such status employs considerable non-figurative language which requires the use of advanced skills in reading.

Conversely the possession of intellectual stature, acquired through formal education, and social graces do not in themselves assure movement toward and acceptance within an upper social class. The financial means required to support the type of life associated with this class may not, for one reason or another, come within the grasp of the highly educated individual and thereby eliminate any possibility of his becoming an integral part of such a group. Here we have an example of an individual,





financially restricted to a position below that of high social status, but who in all likelihood possess all the skills attributed to a good reader, particularly those required to cope with figurative or abstract material, and whose love for reading permeates his entire home and thus profoundly influences the reading habits of an entire family. Again a hypothetical situation to illustrate such a placement. Consider a young man from a home of very modest means who, because of his intellectual capacity and singular dedication to a specific area of study obtains a doctorate via external support such as scholarships. Because of a dedication to his particular area of interest, he reaches only a level of mediocrity in terms of financial standing. As a result of this particular life style, he may find himself as a member of a middle-class group.

It is possible to conjecture, on the basis of the two hypothetical situations above, as to the presence within any given socio-economic level of members who possess, to a greater or lesser degree, the attributes that determine membership within a specific group.

In the first case, an illustration of an individual possessing adequate financial resources to maintain residence within the upper socio-economic community. However, this individual may possess very little to contribute towards the establishment of an environment which is the source of a variety of experiences and the promoter of interrelationships that result in the children acquiring conceptual structures necessary for maximum success in school. That is, the father of such a home,



having obtained financial success in spite of a meagre or non-existent education, might, due to inability or default, do little to assure that his offspring not only acquire the necessary background essential to successful involvement in reading and the educational process, but also the desire to do so, a basic ingredient to ultimate success in any endeavour.

In the latter, we have an example of an individual who might possibly create a familial environment that provides considerably more in the way of experiential background than might be considered well in excess of normal for such a socio-economic level. Such situations could lead to the inclusion of subjects within a study whose performance does not reflect what could be considered as typical of those members belonging to a specific social and economic strata as classified by an occupational class scale. Granted, the examples provided were extreme and as such to be considered as exceptions. However, the possibility that such a misplacement of a subject could take place arouses one's curiosity as to whether the number of marginal cases, in terms of the examples used, present within both groups is sufficient to establish a tendency within the total results of both high socio-economic status and low socio-economic status groups to regress toward a mean.

Another problem arises when investigating questions involving the inclusion of socio-economic status, particularly when the continuum of stratification is separated into three divisions. With the use of three broad categories, it is possible that each of these divisions, in reality, may consist





of levels within a level with substantial differences between the characteristics of each sub-level. For example: It may turn out that a majority of subjects who, in terms of a socio-economic scale, qualify for placement within a lower class grouping, but are in reality, at the upper level of the low socio-economic status possessing as many environmental characteristics that are middle class (at the bottom of this division) as characteristics that are lower class. As a consequence, it is quite conceivable that this study included a number of subjects in each group who were not exclusively representative of low and high socio-economic status and thus exerted on the results a tendency to regress toward a mean.

All of the above points to the improbability of obtaining a sample of subjects who may be considered as totally lower class, middle class or upper class in their familial structure.

#### INFLUENCE OF ENVIRONMENT ON THE DEVELOPMENT OF ABILITIES IMPORTANT TO READING

##### Language

Like so many other happenings in our lives, certain processes come into existence and then evolve in such an orderly and, what appears to be on the surface, uneventful developmental fashion that we come to take for granted the possession of various abilities. Language is a case in point. Its early acquisition and constant use tends to dull our awareness and interest in how it came about. "Speech cannot develop without ...spontaneous vocal interplay between child and adult, or between one child and





another who is sufficiently mature..." (Jenson, 1967; p. 105).

The implication would seem to be that without continuous and rewarding interaction with those possessing mature differentiating and discriminative ability in the use of language, this particularly valuable faculty would not evolve. Therefore the natural potentiality for acquiring language would tend to extinguish from disuse. This concept would seem to be supported by a study carried out by Luria and Yudovitch (1959). Their study centered around a set of twins who at five years of age had severely retarded speech. An investigation of their background revealed that they had, to a large extent, been permitted to engage in activities that excluded parental, sibling, or peer involvement. In other words, they had been pretty well left on their own. Of interest are the results the investigators obtained when the children were separated from each other and placed in an environment in which they were no longer able to communicate with one another in their restricted code, but were placed in contact with other children whose grasp and use of the language were superior in all respects. Within the short space of three months there was a dramatic and significant change in their use of language. This change was even more marked in the twin who had been given special training in language.

The results above provide some rather dramatic evidence as to the manner in which interpersonal relationships influence the language development of human beings. When the findings of the study made by Luria and Yudovitch are examined in conjunction with the kinds of personal inter-relationships that are attributed to



the environs of socio-economic levels at the extremities of this continuum distinct possibilities emerge for the existence of significant differences, both quantitative and qualitative, between the language performance of children from lower socio-economic areas and those children from upper socio-economic areas. Bernstein (1967) in discussing the quantitative and qualitative differences in the language of middle and lower working classes, claims that the language of people coming from the lower working classes is restricted by a vocabulary limited in number and meaning and a rigid and meager syntax that can only thwart verbal elaboration and organization. Their tendency to be concrete centered in their thinking, creates difficulties in areas requiring reading, and in particular, when figurative, non-concrete literary forms are employed.

### Mental processes

There would seem to be little evidence to support any claim that the basic mental processes are a consequence of an unalterable maturational process. Luria (1961, p. 16) points out that these basic mental activities do not spring from some hidden recess in the mind where they came into being at conception, but rather that "...a child's mental activities are conditioned from the very beginning by his social relationship with adults...." This being the case, the inevitable conclusion is that the degree to which an individual's mental faculties are developed is directly related to the extent and variety of one's interaction with his environment. Added to this is the consistency, intensity and wisdom of the parental guidance toward the





maximizing of potential in this regard.

Hunt (1961, p. 259) in presenting his assessment of Piaget's theories, suggests that Piaget does not think that the rate of this developmental process is solely due to environmental circumstances, but he does believe it plays a substantial role and that "...the greater the variety of situations to which the child must accommodate his behavioral structures, the more differentiated and mobile they become." The greater the variety of experiences the child is confronted with, the greater is his ability to deal with things in reality.

The preceding is presented in support of this investigator's belief that an individual's conceptual framework and the mental processes that are employed in the formation of this framework are as much, if not more, a function of one's environment as that of maturation. More precisely, it is suggested that the influence of environment on the formation of conceptual structures is of sufficient magnitude to result in a significant difference in the ability, to interpret proverbs, of children of low socio-economic status (class Five, Six and Seven on the Blishen's Occupational Class Scale) and those children of high socio-economic status (class One and Two on the same scale).

Justification may then be offered for an examination of the extent to which socio-economic status may be related to the conceptions and mental processes of children, particularly those that may be measurable in the performance of tasks employing non-literal language, such as the proverb.



### Nature of environmental influence

The material with which the child constructs his perceptual framework is transmitted via his perceptual skills and are thought to include sight, hearing, and touch. These materials are acquired through contact with the environment and involve mother's care, interaction with those who are familiar, or his own active manipulation of objects he comes in contact with (Vernon, 1962). More specifically Ausubel (1965, p. 10) points out that the child, whose environment is restricted, will develop "...poor perceptual discrimination skills: inability to use adults as source of information, correction, and reality testing, and as instruments for satisfying curiosity; an impoverished language-symbolic system; and a paucity of information, concepts and relational proposition." This then means, that due to a lack of utilization all of the avenues sensory and other, through which the essential information about one's environment is normally channeled to the intellect remain underdeveloped and thus incapable of the adequate transmission of relevant data. It is of importance to keep in mind that a restricted environment in which the preceding deficiencies may occur need not be the exclusive domain of lower socio-economic levels. It is entirely possible that children in environments classified as being of high socio-economic status, may not be provided with opportunities to interact adequately with the environment, physical and human, to assure proper development because of parental default due to intense business and social involvement.

Bloom, Davis and Hess (1965, p. 69) state "...that the





home is the single most important influence on the intellectual and emotional development of children, particularly in preschool years." They go on to point out that the manner in which parents interact with their children, in play, during meal times and on other occasions in which they are together, bears considerable influence upon the kinds and qualities of skills the children acquire. Among these skills is language, particularly abstract language; that is words that enable an individual to categorize, classify and to present ideas that are non-concrete. In addition to this is the importance of the child's physical environment such as the kind and quality of objects around the home such as books and magazines, and the parents example in the use of these materials.

The degree to which the materials and opportunities, referred to in the preceding, are present in the environment would seem to be directly related to the economic status of the family. That is, parents who have a high economic standard will be better able to provide for all or most of the materials and situations important for the maximization of potentiality for development. Thus, children who are reared in homes of a low socio-economic status may very likely be denied access to the media that are considered instrumental in the formation of conceptual structures, particularly those that enable an individual to generalize and engage in abstract, non-concrete thinking, essential requirements for successful interpretation of figurative language, a type of language that is of special interest to this study. It is deficiencies in this area that prevent the developing





reader from reaching full maturity in the reading process. Maturity refers to a level of performance at which the reader is able to go beyond the manipulation of mere basic skills such as perception and word recognition; a level at which he is able to, when called upon, to transcend the literal meaning of words and phrases and interpret them figuratively.

REVIEW OF STUDIES EXAMINING THE RELATIONSHIP  
BETWEEN SOCIO-ECONOMIC STATUS AND  
SPECIFIC MENTAL OPERATIONS  
IMPORTANT TO INTERPRETING  
FIGURATIVE LANGUAGE

A caution about the frequent reference to the specific inadequacies of the members of lower-class families, made in the following paragraphs is probably called for at this time. The conclusions arrived at in most of the studies discussed, appear to be based on a viewpoint held by the middle class of society. The importance to culturally deprived citizens of such a situation lies in the fact that school programs are geared to a level and kind of performance expected of children coming from the middle class. Such educational expectations may lead to serious obstacles for children of low socio-economic status, especially, in so far as this study is concerned, in reading materials which require pupils to engage in mental processes involved in the interpretation of figurative language, the language of the proverb.

A great deal of research has been undertaken to determine whether there is any relationship between children's socio-economic status and their ability to succeed in school. The



results of these studies impressively indicate that children from the lower socio-economic areas are low or deficient in numerous abilities essential to academic success as determined by middle-class values. The faculty to carry out tasks involving an abstracting process consistently reveals itself as a lower class deficiency in these studies. It is precisely this ability that is essential to the students' satisfactory attainment of maturity in reading comprehension. Knipp (1951, p. 290) states that "To be efficient readers, children must learn to think in order to develop varying concepts for the same word and eventually distinguish even between different levels of abstraction, discriminate between referential and emotive language, and recognize and interpret metaphorical language." Bernstein (1967) talks about the linguistic relationship that takes place between the mother and child in lower socio-economic levels in which the mother makes less effort to pressure the child into making verbalizations about his own experiences, either by example or manipulation. This kind of situation does little to contribute to the child's growing vocabulary and challenge the use of that which he already possesses. Because he does not learn to organize, categorize, and record his experiences verbally, they do not become a part of his intellectual repertoire. Hence, when future similar or related experiences occur, he cannot call on the past to assist him in coping with the present. Consider a youngster who has had numerous experiences in which the lesson to be learned was that there is a best time for many tasks to be completed. If these experiences are not recorded via verbal





symbolization, then the application of the proverb "Make hay while the sun shines" to future incidents which are similar may very likely have no meaning for that individual.

Ausubel (1965) claims that because of an impoverished environment that may be attributed to a lack of stimulating conversation in the home, a paucity of printed materials and an attendant lack of example on the part of parents in the use of these materials, the culturally disadvantaged child is much slower and incomplete in his transition from the concrete to the abstract. Furthermore, he is unable to function in the abstract without relying heavily on concrete referents. This is, in large part, due to words and incidents having specific and concrete meanings for these children. For example: The meaning of the word bar will undoubtedly be restricted to such things as the local tavern his father, and perhaps his mother, visits, the iron bar used by local gangs, or the infrequent chocolate bar that is eaten. It is not very likely that he has learned, because of inadequate or non-existent use and example, that words can have meaning beyond the concrete such as that to be seen in the abstract context of "to bar a man from entry" or "he was presented to the bar". Consequently, his language tends to tie him to what he can see or touch, and the abstract, non-literal application of proverbial sayings would lead to difficulty for this child.

Reporting on a study of students at Bennett College who were seriously inadequate in their use of English, Newton (1966) found that among other verbal deficiencies that were evident was



an almost complete lack of ability to understand and cope with figurative language. She points to an inability to understand and use adequately figures of speech and other devices employed in presenting non-figurative expressions, as a stumbling block in making interpretations in reading.

John (1964) undertook a study of grades one and five Negro children from three social classes--lower, middle and upper class--to investigate certain verbal and cognitive behaviors. From the results obtained, she concluded that the lack of opportunities for enrichment of language in the homes of lower-class families hampered the acquisition of an abstract and integrative mode of thinking. Integrative mode is perhaps best described as a process whereby all the relevant data in a given situation are correctly identified in a single category. For example: Given a picture illustrating a group of objects, the individual is able to give the picture a title.

Bloom, Davis and Hess (1965) suggest that the development of cognition in the disadvantaged child ensuing from deficiency in language, restricted experiences and an inadequate stimulation of the intellect, leads to special difficulties in the acquisition of abstract concepts and the ability to generalize. That is, they lack an abstract language--a vocabulary rich in number, meaning and in words necessary in classifying and categorizing, and ideas that are non-concrete, all of which are of importance to the interpretation of proverbs. The adverse consequences of such deficiencies become apparent when the child undertakes subjects requiring such facility in upper elementary and junior high school grades.





Findlay and McGuire (1957) carried out a study of three groups of students, equal numbers of children in each group, randomly chosen from grades three, six and nine. In each group half the membership was chosen from lower socio-economic homes and the other half from middle-status background. Socio-economic status was based on a modification of Warner's Index of Status Characteristics (ISC). Warner's ISC is based on a rating of four environmental characteristics--occupation, source of income, kind of dwelling occupied, and the residential area in which the house is located. All these ratings were weighed and combined into a single index (Eells et al, 1951). The modification mentioned above refers to the omission of the kind of dwelling occupied as one of the ratings in setting up their index.

In this study the subjects were required to carry out a sorting problem involving abstract behavior. The middle-class children produced results which clearly indicated their superiority over those children from lower-class background. This study is of particular interest since it employs middle-class subjects who, even though they are nearer the low-class children than are those from high-class status on a high socio-economic low socio-economic continuum, obtained results that gave added support to claims that children from lower socio-economic environments may not function mentally in the same manner as do children in the upper socio-economic levels. The results appear to imply that children of low socio-economic status tend to display a weakness in tasks which require abstract reasoning.





From the point of view of this study, the ability to engage in tasks that require verbal abstraction and generalizing are important to the child in his confrontation with figurative language. Proverbs are considered to provide a useful means of determining the existence of these facilities (Gorham and Elemore, 1957; Pikas, 1966). Proverb tests have been, and continue to be, used as an instrument to measure the abstractness or concreteness of a subject's mode of mental operation, which is gauged by the persistence displayed in selecting either correct non-literal or correct literal responses. Most of the studies reviewed report that children of low socio-economic status characteristically are limited in their ability to engage in tasks that transcend the concrete while their opposites tend to display superior performance in abstract mental operations. The performance of both groups on a proverbs test, requiring reading ability, should provide data that will either support or disagree with the predominant views.

In 1957 a study to determine the relationship between socio-economic status and conceptual thinking was undertaken by Siller (1957). He chose as his subjects 181 white sixth grade pupils from the New York school system. They were allocated to two groups: ninety-nine children in the high status group and eighty-two children in the lower status group. Status was determined by free lunch data and the answers obtained on a questionnaire which provided for a modification of the Warner ISC mentioned earlier. The subjects were required to perform on three types of testing instruments: one measured verbal and non-verbal classification, another dealt with verbal



and non-verbal analogies tests, and the third was a vocabulary test with definitions varying along concrete-abstraction dimensions. The results indicated that it was more characteristic of high-status children to respond in an abstract manner than it was for lower-status subjects. More precisely; when the subjects were presented with alternative answers that were correct, but differed in terms of a concrete-abstract continuum, the pupils of high-status more often selected the abstract answer than did those subjects of low status. This difference in performance persisted even when the poorest readers in the low-status group were removed from the study.

Taba (1964) claims that many of the testing instruments used in schools to measure student academic potentiality are restrictive in that they require the capacity to manipulate verbal symbols and abstractions. She asserts that it is precisely these kinds of abilities that the environments of culturally deprived children fail to develop. Taba points out that the lack of environmental stimulation, verbal and manipulative (i.e. books, objects and so forth), results in an impairment of ability to translate objects and events into verbal symbols, to deal with relationships, causal and other, and to carry out abstractions.

Riessman (1962, p. 115) points out that in spite of what appears to be a deficiency in abstracting ability, children from lower socio-economic areas "...are capable of developing abstract, symbolic thinking." He goes on to explain that it isn't that they have a dislike for, or an inability for, abstract





thinking, but rather that they do it in a different manner, approaching the abstract through an even closer association with the concrete than children from higher socio-economic status. This viewpoint is of particular interest to this study since the interpretation of proverbs, discussed in detail in Chapter III, calls for the literal or concrete translation to precede the transfer of the meaning, represented in the proverb, to other situations that may also be concrete in nature. The abstraction here involves being able to secure the universal truth expressed in the proverb and to be able to relate this principle to a quite different context that involves the same principle. It could be said that there is a close association between the concrete and the abstract, where proverbs are concerned, which could benefit the children of low socio-economic status in terms of Riessman's suggestion.

Eells, et al (1951) undertook a study in the late nineteen forties in which they investigated cultural difference and its effect upon children's intelligence. One part of the study, involving the use of four proverbs, examined thirteen and fourteen year old children's ability to select from four possible answers following each proverb, the one which represents the best figurative meaning for the proverb.

The children from high-status environments scored significantly higher on the proverbs items than those from low socio-economic areas. However, it was interesting to note that a substantial number of children from lower-status backgrounds successfully selected the more acceptable abstract answer to the proverb items.



It is interesting to note that not all of the studies attest to the apparent inability of children from lower socio-economic areas to deal in abstractions and to generalize. There is an indication that these children may be able to function intellectually in the abstract, but that they function in a different way than do the children from high socio-economic areas by a closer association with the concrete. There is also an indication that many of the children of low socio-economic status may be able to successfully perform on material involving proverbs. These possibilities are of considerable importance to this study and serve to act as restraints to reaching for heady and premature conclusions.

#### SUMMARY

Proverbs possess a lineage that goes back hundreds of years ago and appear to be universal in their use throughout the world. It has been advanced that proverbs occur in a developing society at the pre-literate stage of its development. This view, along with the suggestions that proverbs are the brainchild of the common folk, presents some far reaching implications for this study.

Research as to the extent of use of figurative language reveals that there is a trend toward an increase in the use of this type of language. Studies leave little doubt as to its use in the upper elementary grades. There is also considerable evidence that it is used fairly extensively in content areas other than literature and reading. There is disagreement among





authorities in the field in regards to whether children in the elementary grades are able to make the kinds of generalizations required to engage in activities involving figurative language. Some recent studies present evidence that children at the upper levels of the elementary grades are able to cope with figurative language, in particular when called upon to interpret proverbs that are provided with responses.

There is a persistent reference, direct and implied, to language throughout the study. The relationship between oral language and written language is explored and general agreement was found that the two areas are related. The proverb, too, is involved in this relationship having played an important role in the development of language and has subsequently been preserved through oral transmission and, more importantly, the more reliable transmission mode of the printed word.

An examination of the criteria generally used in establishing socio-economic scales upon which a child's SES is determined, revealed the possibility of discrepancies occurring which could conceivably effect the results obtained.

There seems to be fairly general agreement among the experts that the development of language and mental processes important to reading are dependent to a considerable degree on an individual's environment. This includes his own active involvement as well as active and knowledgeable guidance by his parents within an environment rich in things that stimulate the senses.

Many of the studies investigating whether socio-economic level has bearing on a child's intellectual development seem to





reveal that there is indeed a negative effect for those within low socio-economic levels. However, one or two of the studies considered, possessed sufficient merit to warrant a delay in concluding that children from low socio-economic levels are incapable of higher levels of reasoning. This would seem to point out a need for more research in this area and an increased awareness on the part of teachers that there are differences, although it is uncertain what they are, in the performance of children from lower socio-economic environments and those from the high.



## CHAPTER III

### THE READING OF PROVERBS

Chapter III has as its main goal an account of the investigator's concept of the reading process and how it functions in the reading of proverbs. It is a concept that has been derived from two main sources. Pragmatically, there are the numerous and repeated observations made while having been actively engaged in the teaching of reading in the classroom and in the diagnoses of students with reading disability. The perusal of relevant literature undertaken to ascertain the truth of pronouncements to the effect that the reading process was an extremely complex one has also proved to be a rewarding source in that it has provided a theoretical framework upon which the conclusions accrued from observations within the school setting have been molded. The fusion of pragmatic and theoretical considerations into a tangible and plausible concept is attempted in this chapter.

In measuring the success of such an undertaking, it might be useful to note that the formulation of such a concept is limited by the inability to prove conclusively, through actual physical observation of the phenomena, whether the activities and skills attributed to the reading process do in fact occur when the process is activated, and whether its nature is the same for each individual and situation.

The first section of this chapter will examine the reading process with brief references to proverbs. The second section





will specifically discuss the reading of proverbs in terms of the concept of the reading process.

### THE READING PROCESS

The large numbers of reading disability cases in evidence in our schools today would seem to point an accusing finger at any suggestions that portray reading as a simple act. It is noteworthy that during the past few decades there has been a decided trend away from the view held of reading as a simple mechanistic process initially utilizing redundancy as a means of developing, stabilizing and entrenching the skills considered fundamental to reading (i.e. word recognition, reading by phrases and etc.), to theories acknowledging that the reading process is an exceedingly complex one employing large numbers of skills and techniques (Tinker, 1952, p. 10). Stated quite simply, it would appear that there are two basic concurrent and interrelated operations involved in the reading process; one being the mechanical or physical act of seeing and noting printed or written symbols and the other being a mental operation that gives meaning to the stimuli acquired via the first act (Dechant, 1964, p. 12). However, not providing further clarification of the preceding is to lend credence to the earlier view of the reading process being a somewhat simple and uncomplicated activity.

At its earliest conception, the reading process involves a confrontation between two distinct and unique individuals. The primary instigator in this confrontation is the author who



presents, written or printed, symbols arranged in a manner calculated to convey to the reader meaningful messages or ideas. These ideas or messages are a product of an experiential background that leads to the formation or development of a conceptual structure of knowledge, beliefs, values, interests and feelings that the author needs to communicate to others. The second participant in this confrontation is the reader, who like the author, brings with him to the printed page the results of an experiential background or conceptual structure in the form of knowledge, specific interests, values, and beliefs about life and the world around him. However, even though the reader may lay claim to an abundance of the preceding, it would be to no avail were he not to possess an interest and desire to engage in a communicative endeavor with the author. To confront the printed page otherwise is to engage in an exercise of futility or in the fulfilment of an obligation.

The confrontation, referred to above, is no less evident in the reading of proverbs. The primary instigator, who in the oral bound society were the elders of the tribe, and in this instance unknown, confronts the reader with specific verbal illustrations of universal truths which may be generalized to numerous events, of varying degrees of importance, in the reader's life.

Neither the writer or the reader develops his unique conceptual structure in isolation and as a consequence, external forces are instrumental in this development. Society is the vehicle through which these forces operate in the fulfilment of



their role of influencing the nature and extent of the individual's conceptual structure. The family unit with its social, economic, religious, moral and racial structure provides the initial environment in which the individual begins to develop a conceptual framework which will determine, to a marked degree, his future development. The school, too, makes a significant contribution through the individual's relationships with his peers and teachers and through his involvement in the pursuits offered by the school. Society at large plays a significant role in the development of an individual's conceptual structure by making available an almost unlimited range of environmental situations each possessing its own particular social, economic, religious, moral and racial framework.

In addition to the conceptual framework that the individual reader brings with him to the printed page, he also brings physical attributes, developed to varying degrees within each individual, essential to the first stage of the reading process; mainly that of vision which results from the combined efforts of the eye and the nervous system. In this respect the first step in the reading process is a biological one. That is, symbols on the printed page are projected on the retina and transmitted through the optic nerve to the part of the brain involved in processing the incoming data. Up to this point, all that is required of the reader is the ability to see the printed symbols with reasonable facility and clarity and to convey the image received on the retina through the nervous system to the brain. At the end of this stage one of two





situations exist and, in large part, determine the rapidity with which the process may continue. If the symbols, in the form of letters and words are known to the individual or, in any event, readily deciphered there is little or no delay in proceeding on to the next step.

However, it should be noted that to know a word or be able to decipher a word is in itself not sufficient. The particular meaning that a word may have, for example: In the proverb "beauty is only skin deep", the word skin could refer to the surface of any object, situation, or idea, dependent on the use of the proverb. That is, an idea that on the surface appears to be a good one, may, in fact, have an evil intent. Failing this, the on going process is delayed while the reader resorts to a means of acquiring the meaning (e.g. dictionary). Should the word or words be unknown to the reader, the process is sidetracked while word attack skills are brought to bear in an effort to attach meaning to the individual groups of symbols. Once the preceding has been successfully achieved, the process continues on to the other mental activities involved in reading.

At this stage it should be pointed out that it is somewhat difficult to discuss the various aspects of the reading process without leaving the impression that they occur in a sequential fashion. It is not the purpose of this discourse to make a firm commitment to a theory that this is the case. However, it would seem logical that the sequence suggested in the preceding paragraph would, of necessity, have to occur before the specific types of activities elaborated in the



following paragraphs could take place. There is, though, an attempt to present these activities in an order it is thought they might be undertaken by the reader during the reading process.

Comprehension is basically an activity during which the reader is called upon to obtain the meaning or import of the author's presentation. It involves an integration of the continuous flow of meaning presented in either words, sentences, or paragraphs into one central idea or a series of conjunctive ideas (Gray, 1960, p. 10). It also frequently demands that the reader not only be able to attach the literal meaning to words read but to also interpret their intended meaning when they are used in figurative expressions such as proverbs.

Being able to extract the correct meaning from a proverb is, in essence, an indication of abstract functioning in the mental processes of an individual.

In the proverb "Make hay while the sun shines" one may deduce that it had its origin in the experiences of those engaging in the concrete haying situation and concluding from this actual experience that hay is harvested best during hot, sunny weather. The first abstraction occurred when this observed natural phenomenon was given oral substance in verbalization. Further abstraction, removal from reality, takes place when the oral is transformed into printed symbols to represent the facts of that particular situation. When the proverb is presented along with responses, the reader must be able to transcend the concrete and abstract from





the proverb, a generalization, in this instance, that there is a best time in which many activities are best carried out.

Pikas (1966) writes about his investigation and search for an operational definition for the process of abstraction. At one point, he discusses abstractness in specific reference to proverbs. He talks of the act of making the correct symbolic representation, the correct abstract response, as a promising operational definition for a term that has proved to be fairly elusive in regards to a useful and clear cut definition (p. 82). To make correct interpretations of figurative language, the reader must call on his own fund of experiences and their attendant concepts and ideas, comparing them to those presented, either directly or indirectly, hopefully leading to an association that is specific and then generalized. As may be seen, the degree to which the reader obtains correctly the ideas the author presents will be governed by the extent to which the reader's own environment or past experiences have been impoverished or enriched. For example: If a writer were to use the proverbial expression "Make hay while the sun shines" the reader who has no experience, real or vicarious, with cutting of hay would certainly be thwarted in his efforts to get meaning from the expression, particularly with "make hay". It is this activity of making the correct interpretation in the reading process with which this study is mainly concerned. Further consideration of this aspect, with particular emphasis on the environmental or experiential background, has been given in Chapter II.



Once a reader has obtained the author's meaning, he should become involved in a form of interaction, overt or other, during which he reflects on the author's meaning, once again delving into his own fund of knowledge and experiential background in order to evaluate previously acquired and related ideas in the light of the new offering which will lead either to a better understanding of those concepts or beliefs presently in the individuals repertoire or the revelation of new concepts and understandings that are unique to each individual. Harris (1962, pp. 8-9) tells us that "...a reader must create his own meaning by seeking to understand, by using his past experiences and the vocabulary and ideas he has gained before, and by thinking about the speaker's ideas and reacting to them." Tinker (1952) supports this view indicating that what meaning the reader obtains from a page of print is his own personal re-creation based on his own experiences and thus results in an understanding that very likely is different from that obtained by any other reader.

Like the interaction stage, the next activity to be considered in the reading process is by no means a passive one. In a sense, it would seem that this fourth activity is merely a natural extension of the preceding and involves a further evaluation of the new in terms of the established. It is a stage during which the reader responds in what might be referred to as an emotive fashion to the messages being presented on the printed page and becomes actively engaged in a sorting out of the established and relevant concepts and beliefs for assessment



as to their relative worth in terms of new ones being proffered by the writer. This is then, in essence, a stage where decisions are to be made; when the reader, on completion of his assessment, either rejects or accepts, in part or in full, those concepts and beliefs gleaned from the ideas presented by the author. It is a period during which "...we acquire concepts and expand and modify old ones; we form new habits and improve and refine old skills" (Harris, 1962, p. 10). It is a stage of the reading activity that inevitably touches us in one way or another, regardless of rejection or acceptance, and often as not, affecting us without our being aware of this change (Gray, 1960, p. 12).

On having taken an overview of the phases in the reading process and considered the varying kinds of printed materials that confront individuals in the normal course of living, one is led to question whether all steps in the process must be brought to play, regardless of the material being perused. For example: Does one employ all the levels when following a recipe for a new cake, or when reading the directions for assembling the various pieces of a machine, or when reading the cartoons or reading for pleasure alone? There appears to be insufficient reliable evidence to support or negate either view.

#### READING PROVERBS

It would seem appropriate to the time to determine just how the reading of proverbs fits into this conceptual framework of the reading process. The proverb "Make hay while the sun shines," is used as an example in examining just what aspects of





the reading processes are employed in reaching the intended interpretation.

In the first place, the individual must undertake the physical process of perceiving the words or the proverb on the printed page. Once this is accomplished the reader must then be aware of the meanings of each individual word that makes up the expression before being able to proceed to the next step. This implies previous experience with that which the word represents (e.g. hay) whether this experience be direct or vicarious.

An understanding of each word in the proverb is followed by the integration of the various meanings into the central literal idea presented in the saying; in this case that the best time to cut hay is during summer weather. Again an experiential background, something more than that necessary to the understanding of individual words, is required to carry out this task. It assumes that the individual has acquired some knowledge on the subject through association with activities, real or vicarious, surrounding the "making of hay". Were this not the case, the question would arise for the uninitiated as to "Why not at other times?" thereby negating the import of the saying.

The acquisition of the literal meaning of a proverb, such as "Make hay while the sun shines", should lead to the next step which involves a comparison between the concrete factual situation described in the proverb and the current situation to which it is being applied. An example of the latter situation could be the occurrence of wet heavy snowfall which is the best



time to make a snowman. As mentioned earlier, the reader must be able to generalize the idea that there is a best time to "make hay", to there is a best time to undertake various tasks and relate this generalized concept to the current situation (a heavy wet snowfall) being presented. Again, the demands of this step pre-suppose an experiential background in which the individual has discovered the universal truth that numerous activities and responsibilities (obligations) are best carried out under particular conditions or specific times.

Once the reader has been able to make the generalization referred to above, he must be able to determine whether this generalization is appropriate to the particular situation it is applied and accept or reject its use on the basis of a personal judgement requiring mental manipulation of concepts that are already a part of the individual's conceptual framework.

It should be noted that when an individual has previously undertaken the step of acquiring the literal meaning of a specific proverb, it is very probable that a further encounter with the same proverb may not require this preliminary step; the individual can proceed directly to the figurative meaning.

On the basis of the above, it would appear that while interpreting proverbs, a reader engages in all the steps involved in the reading process. In this study, the context is provided by the contrived situations in the form of four responses for each proverb.





## SUMMARY

There has been a decided change in thinking during the past few decades in regard to the complexity of the reading process. This thinking has moved away from the view that reading was a simple, mechanistic process to the view that it is a multi-varied, complex procedure.

The reading process consists of four main activities, (1) perception, (2) comprehension, (3) interaction, and (4) integration. The preceding, in essence, represents a teaching model of reading.

There is little evidence to support or negate the view that reading, to be reading, requires the implementation of each and every step.

An examination of the steps likely undertaken in interpreting proverbs leads to the conclusion that it would appear that all phases of the reading process are employed in carrying out this task, particularly on initial confrontation by the individual.



## CHAPTER IV

### THE EXPERIMENTAL DESIGN

The purpose of this chapter is to present an account of the measuring instruments used in the study; to provide a description of the test sample; to discuss the administration and scoring of the tests; and to describe the statistical treatment of the data.

### THE MEASURING INSTRUMENTS

Four sets of data were considered to be of basic concern to this study and were obtained for statistical analysis. These consisted of:

1. a numerical rating for parental occupation, to establish socio-economic status, based on Blishen's Occupational Class Scale,
2. an I.Q. score obtained on the Lorge-Thorndike Intelligence Test, Level C. Form,
3. the raw score from the Sequential Test of Educational Progress, Reading Form 4A,
4. the abstract, concrete and total scores obtained on Miller's Reading-Proverbs Test, which serve as criteria scores.

In establishing socio-economic status of the children participating in the study, Blishen's Occupational Class Scale was used.



### Occupational Class Scale

Blishen's Occupational Class Scale (Blishen, 1961), hereafter referred to as the Blishen Scale, was designed specifically for use in Canada. In its construction, 343 occupations were ranked in accordance with the number of years of formal education required to qualify for these occupations and the income that could be expected for each occupation. These two variable were converted to standard scores then combined and averaged resulting in the formulation of a scale with a numerical rating of thirty-two to ninety, a mean of approximately fifty, and a standard deviation of ten (pp. 151-152). In a comparison between the Blishen Scale and Hatt's National Opinions Research Index, a correlation of .94 was obtained (p. 523).

In addition to the numerical rating, the 343 occupations are grouped into seven classes starting with the highest rankings in class One to the lowest in class Seven. Parental placement, father's and mother's where applicable, in classes Five, Six and Seven on the Blishen Scale served as the determinant of a student's inclusion in the low socio-economic group while parental occupational rating in classes One and Two indicated placement in the high socio-economic group.

Two considerations were involved in the selection of classes to represent low and high SES. One was to assure a substantial separation between the low and high SES groups. The second, and more important, determinant in this class selection was the need to include sufficient classes in both groupings to assure that an adequate number of subjects would be available





from which the random selection would be made. It became evident early in the study that a restriction to class One for the high SES and class Seven for the low SES would demand an enormous increase in the test population in order to guarantee an adequate number of acceptable subjects. Lack of time and the added inconvenience to a school system already burdened with studies initiated by the University of Alberta dictated the inclusion of class Two at the high SES level and classes Five and Six at the low SES level.

In cases where it was indicated that both parents were working, the numerical rating for the occupation of each parent, as denoted on the Blishen Scale, was added and divided by two to provide a composite rating. Where neither of the parents were working, the occupation engaged in by the father prior to unemployment was used to obtain a rating.

#### Lorge-Thorndike Intelligence Test, Level C Form

The Lorge-Thorndike Intelligence Test, hereafter referred to as the Lorge-Thorndike Test are a series of tests made up of two batteries, verbal and non-verbal. The verbal battery is based on the premise that most ideas that are communicated at all levels are expressed to an extent, via verbal symbols. Since it is generally believed that there are many who, due to being raised in an impoverished environment, whether it be socio, economic, educational or any combination of these three, are unable or unmotivated to cope with verbal symbols. A non-verbal battery, paralleling the verbal battery, is provided to accompany the latter.



The verbal battery is made up of various subtests that employ the use of verbal symbols. These subtests are Word Knowledge, Sentence Completion, Verbal Classification, Verbal Analogies, and Arithmetic Reasoning. The Non-verbal Battery utilizes three subtests called Figure Analogies, Figure Classification and Number Series. All items for the three subtests are presented either pictorially, diagrammatically, or numerically, to avoid the use of verbal symbolization (Lorge and Thorndike, 1962).

The administration and scoring of the above test was carried out by the staff of each of the schools participating in the study. This task was carried out during the school year as part of a regular testing program established by the Edmonton Public School System. The data were obtained through the principal of each school and were recorded in the pupils' cumulative record card.

#### Sequential Tests of Educational Progress, Reading Form 4A

This test, hereafter referred to as STEP, was designed to evaluate student ability to read new printed material with "...comprehension, insight, and critical understanding" (Educational Testing Service, 1957, p. 10). In this evaluation, five reading skills are tested: Ability to (1) understand direct statements made by the author, (2) interpret and summarize a passage, (3) see the motives of the author, (4) observe the organizational characteristics of the passage, and (5) criticize the passage with respect to its ideas, purposes and presentation (Educational Testing Service, 1957).





STEP is set out in two parts. Each part is made up of seven reading selections, each of which is followed by five multiple choice questions containing four possible answers, only one of which is correct and the other three, wrong distractors.

As in the case of the Lorge-Thorndike Test, the administration and scoring of STEP was carried out during the school year by the staff of each school involved in the study.

#### Miller's Reading-Proverbs Test

A multiple choice testing instrument, known as Miller's Reading-Proverbs Test, hereafter referred to as the Proverbs Test, was constructed that is, similar in structure to proverbs tests designed by Gorham (1956) and Watts (1944) in that each proverb is provided with four possible answers.

In the construction of the test, sixty proverbs were initially chosen from the 5,000 provided in Browning's Everyman's Dictionary of Quotations and Proverbs (1951). The choice of the sixty proverbs was based on the investigator's opinions as to their simplicity and appropriateness to elementary school students at the grade six level: Simple in that the syntax of the proverbs would not pose a problem for pupils at this level and appropriate in that the vocabulary could be within their range. The proverbs were also discussed informally with many people, some of whom were teachers at the grade six level, in an effort to obtain outside opinions as to their appropriateness for the study.

Each proverb was provided with four possible answers constructed by the investigator. The decision to use a multiple



choice format was based on two considerations. First, the inclusion of four responses for each proverb presented was the format used by those who have had considerable experience in this area (Gorham, 1956; Watts, 1944). Second, Orton's (1966) study demonstrated that pupils at the upper elementary level experience considerable difficulty in providing their own explanations of the symbolic representation of a proverb. Indeed, it is likely that many adults would experience the same difficulty. This does not necessarily indicate the lack of ability to interpret proverbs but rather an inability to engage in what could be considered a more complex task of providing an explanation of the proverbs' symbolic meaning. The same study showed that when pupils are presented with four choices, each of which represents (though not all correct) a hypothetical situation to which the symbolic meaning of the proverb may be compared through analogy, the pupils demonstrate an ability to make the generalizations required.

Two of the responses provided for each proverb item in the Proverbs Test constituted literal responses, one correct and the other a concrete incorrect distractor, while the other two answers represented non-literal responses, one correct and the other an abstract incorrect distractor. Of the two correct responses, the non-literal answer was considered to be the better interpretation because it was non-specific and required abstracting ability to note its relationship to the proverb. The purpose of including a concrete response in each item is that most proverbs have a concrete base



which expresses a truth. For example: The proverb "A stitch in time saves nine" contains the concrete, literal meaning that mending a tear when it takes place will require fewer stitches than if it is allowed to remain unrepaired beyond its occurrence. This is a true statement. Its inclusion as a response among others in a proverb item should provide a better measure of a student's abstracting ability, for if the student is able to consider and consistently bypass the correct concrete response as instructed, which provides an obvious literal answer, this would seem to provide a fairly reasonable indication of his ability to deal with non-literal content of proverbs.

The vocabulary of the responses in each proverb item was screened for difficulty at the grade four level through the use of The Teacher's Word Book of 30,000 Words (Thorndike and Lorge, 1952). That is, 95 per cent of the words used in the responses are found to be in reading material at the grade four level, which, in turn, implies that these words should be known to pupils at the grade four level. In this way, an attempt was made to avoid the use of words whose meanings may be unfamiliar to substantial numbers of students at the grade six level due to a poor vocabulary.

The sixty proverb items and the responses for each item were assigned to their final position on the initial test by use of a table of random numbers.

A set of teacher's directions was prepared to accompany the administration of the test to provide uniformity in its





administration and the instructions presented to the students prior to the commencement of the test (see appendix). Two example items were included in the initial test and were presented on the first page. These examples provided an opportunity for students taking the test to acquire insight as to what was required of them, both in the selection of a response and the method of marking the machine scored answer sheets.

### Pilot Project

The sixty item proverbs test was administered as a pilot project to all grade six pupils in four schools of the Edmonton Separate School System during the early part of June, 1968.

The administrative staff of the Edmonton Separate School Board had been requested to assign four schools to the pilot project, two from a high socio-economic area and two from a low socio-economic region of the system.

The reference to a separate school system above might very well warrant further elaboration to clarify. The School Act of the Province of Alberta permits the establishment of school systems, called separate school systems, by minority groups in a given area, if and when such a group deems it a desirable thing to do. Funds for the operation of such a system are obtained in the same manner as those raised for public schools; through municipal taxation on property and provincial government grants. The majority of separate school systems in this province are supported by Roman Catholics. The Edmonton Separate School System is Roman Catholic supported. There are, however, a few



areas in which the number of Roman Catholics exceed the combined total of non-Catholics and as a result, constitute a public school system. The minority groups, consisting of non-Catholics in these communities, have joined together to form protestant separate school systems.

The sixty item proverbs test was administered on each occasion by the investigator in order to control for the teacher variable and to provide an opportunity to observe, firsthand, student reaction and to note those areas of the test, instructions and other, that might possibly require revision for the final test.

The student answer sheets were scored on an IBM 1230 optical scoring machine and the data cards recording the scores from the answer sheet were punched on an IBM 530 keypunch machine.

Students' performance on the test in the pilot study was statistically analyzed by a test item analysis program supplied by the Division of Educational Research Services at the University of Alberta. On the basis of this statistical analysis, the thirty best items were chosen to make up the Proverbs Test which was to constitute the source of criterion scores to be used in the study. In addition to this, the analyses were also used in determining the need to alter the structure and wording of any of the multiple choice answers that indicated a distorted distribution of student choices.

In the selection of the thirty best items, two criteria were used. First of all, careful consideration was given to





items whose difficulty index approximated .50 and a validity index in excess of .20 obtained through the use of biserial coefficient of correlation (Garrett, 1958, pp. 365-368). Reliability of the test was determined by the split-half technique (Garrett, 1958, pp. 339-340) and the use of the Kuder-Richardson formula 20 in computing reliability coefficients (Ferguson, 1966, pp. 379-380).

The difficulty index of an item provides a decimal numerical rating of the difficulty index of .50 is an indication of the maximum variance that an item can have and occurs when 50 per cent of the pupils writing the test pass the item and the remaining 50 per cent fail it. As the difficulty index increases, the easier an item is while a decrease indicates increasing difficulty of an item.

The validity index is a measure of the extent to which a test item discriminates among those individuals taking a given test. This biserial coefficient of correlation reveals the correlation that a particular item has with the total score of the test.

The Kuder-Richardson formula 20, hereafter referred to as KR-20, is a measure of the internal consistency of test material. Where items measuring similar attributes on a test have a high intercorrelation with each other, then a high reliability coefficient will be obtained (Ferguson, 1966, pp. 379-380). In addition, KR-20 is a measure of the correlation of the items with the test as a whole.



A distorted distribution of student choices of the multiple choice answers for each item was indicated when large numbers of subjects chose answers that were neither the correct desired non-literal response nor the correct less acceptable concrete response. Distortion was also indicated when the distribution by fifths of a choice of an answer varied abnormally from the distribution by fifths established on the total test. Fifths is a reference to the ranking of examinees in order of their performance on a particular test and the subsequent division of this ranking from lowest 20 per cent of the pupils to the highest 20 per cent. When such distortions did reveal themselves, the particular response concerned was examined for awkward wording and construction and then revamped as required.

A test item analysis of the results obtained by the 161 subjects who participated in the pilot study revealed a KR-20 reliability coefficient of 0.9177. An examination of the difficulty index of the sixty items, using a frequency distribution, revealed that a fairly extensive number of the test items, 60 per cent, fell between 0.766 and 0.920 (Table I). As was stated earlier, the size of this number provided an indication of the relative difficulty of a particular item. The larger the difficulty index number the larger the number of pupils who were able to respond successfully thus indicating a simple item. Similarly, a decrease in this number points to a decrease in the number of students who were able to respond correctly indicating a more difficult item.

A similar analysis of the results, using the validity



TABLE I

FREQUENCY DISTRIBUTION BASED ON DIFFICULTY INDEX OF SIXTY  
ITEMS USED IN PILOT STUDY TEST

Difficulty Index	Number of Items	Percentage of Total
.300 - .455	2	3 1/3
.456 - .610	6	10
.611 - .765	16	26 2/3
.766 - .920	36	60

TABLE II

FREQUENCY DISTRIBUTION BASED ON VALIDITY INDEX OF SIXTY  
ITEMS USED IN PILOT STUDY TEST

Validity Index	Number of Items	Percentage of Total
.236 - .416	10	16 2/3
.417 - .596	6	13 1/3
.597 - .776	22	36 2/3
.777 - .956	20	33 1/3





index of each item as the basis for grouping, revealed a distribution that was more homogeneous (Table II), than that for a grouping using difficulty index as the base. The pronounced imbalance of distribution noted in Table I led to the decision to use the difficulty index as the main basis for determining those items that would be eliminated in the selection of thirty items for the test to be used in the main study. This decision resulted in the elimination of twenty-eight items with a difficulty index between 0.766 and 0.920 and two items between 0.611 and 0.765.

Table III offers a comparison between the sixty items used in the pilot study and the thirty items that were selected to make up the Proverbs Test based on the frequency distributions established for Tables I and II. Selection of the thirty items on the basis of their difficulty index tended to produce a better percentage distribution by intervals than ensued from the inclusion of all sixty items. The alteration of distribution by intervals on the validity index of the items was cause for little concern since it had been already established that a base figure of .200 was an acceptable level and none of the sixty items reached this base level.

The thirty items selected following the item analysis were then established as those making up the Proverbs Test with twenty-eight items being assigned their relative positions on the test by use of a table of random numbers. Two items were positioned, one and two on the test, and were selected for their relative simplicity, i.e., a difficulty index in excess of .900



TABLE III

COMPARISON OF FREQUENCY DISTRIBUTIONS BASED ON THE DIFFICULTY INDEX AND VALIDITY INDEX BETWEEN SIXTY ITEMS IN THE TEST USED IN THE PILOT PROJECT AND THIRTY ITEMS IN THE PROVERBS TEST USED IN THE STUDY

Difficulty Index	Sixty Items used in Pilot Study		Thirty Items Selected	
	Number of Items	Percentage of Total	Number of Items	Percentage of Total
.300 - .455	2	3 1/3	2	6 2/3
.456 - .610	6	10	6	20
.611 - .765	16	26 2/3	14	46 2/3
.766 - .920	36	60	8	26 2/3
Validity Index	Percentage of Total		Percentage of Total	
	Number of Items	Percentage of Total	Number of Items	Percentage of Total
.236 - .416	10	16 2/3	10	33 1/3
.417 - .596	8	13 1/3	5	16 2/3
.597 - .776	22	36 2/3	13	43 1/3
.777 - .956	20	33 1/3	2	6 2/3





in order to serve as easy starters. As each of the four responses for each item had been originally assigned its position through the use of a table of random numbers, it was considered unnecessary to reassign them. The two examples used in the pilot test, as well as the instructions, excepting a few minor adjustments, were retained to become an integral part of the Proverbs Test (see Appendix).

### THE STUDENT TEST SAMPLE

The total student population, from which the test population was selected, consisted of all the grade six classes under the jurisdiction of the Edmonton Public School system. Edmonton is the capital city of the Province of Alberta which is located in Western Canada. The city is geographically situated near the centre of the province and has a population of about 450,000. The test sample of 100 students used in the study was chosen from the test population of all grade six students from four schools. The administrative staff of the Edmonton Public School Board were requested to authorize four schools for the study, two of which were to be representative of schools in a low socio-economic area and two from a high socio-economic area. Their selection was to be based on a knowledgeable opinion as to those which best represented low and high socio-economic regions within the Board's legal boundaries. The student sample consisted of 100 students: twenty-five girls and twenty-five boys selected from schools representing a high socio-economic community and the same number and distribution of



pupils from schools representing low socio-economic areas.

It must be acknowledged that not all children living in low socio-economic areas are necessarily of a low socio-economic status. Data collected for the study revealed that a number of students were children of parents whose occupation placed them comfortably above the scale rating for low socio-economic status as established for the study. Their presence in these areas might possibly be attributed to a desire to maintain long established roots in a district in which they had begun their marital life and in which they had built their first home. In any event, a scale for measuring socio-economic status, described in the first section of this chapter, was the final arbitrator in this regard.

The distribution of the sample by sex and socio-economic status based on their placement on the Blishen Scale, and by their raw scores obtained on STEP and the intelligence scores on the Lorge-Thorndike Test, leads to unexpected but interesting observations (Table IV). First, the distribution of the sample by class based on the Blishen Scale indicates a fairly well balanced distribution. The extremes of the scale have similar number of subjects in each; a total of twelve high subjects in class One and eleven low SES subjects in class Seven. Class One includes occupations such as engineers, dentists and judges while class Seven consists of occupations such as janitors, fishermen, hunters and trappers. An examination of the number of subjects by sexes shows a similar balance with six boys of low SES in class Seven and five boys of high SES in class One while there are six girls of low SES





TABLE IV

FREQUENCY DISTRIBUTION OF THE TEST SAMPLE BY  
SES, SEX, OCCUPATIONAL CLASS, READING  
ACHIEVEMENT AND INTELLIGENCE

Student Grouping		BLISHEN SCALE					STEP					LORGE-THORNDIKE TEST				
		SES Class					Reading Achievement Score					Intelligence Score				
		1	2	5	6	7	26 35	36 45	46 55	56 65	66 75	80 95	96 110	111 125	126 140	141 +
	Sex	-	-	10	9	6	2	6	8	9	0	10	10	5	0	0
	Boys	-	-	11	9	5	2	2	8	12	1	11	10	3	1	0
	Girls	-	-	21	18	11	4	8	16	21	1	21	20	8	1	0
	Total	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		5	20	-	-	-	0	1	9	11	4	1	10	11	3	0
	Boys	7	18	-	-	-	0	0	1	20	4	0	5	12	6	2
	Girls	12	38	-	-	-	0	1	10	31	8	1	15	23	9	2
	Total	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-





in class Seven and seven girls of high SES in class One. An examination of the number of subjects in classes Five and Six of low SES and class Two of high SES demonstrates a continuance of this balance. However, when an examination is made of the distribution of scores on the Lorge-Thorndike Test and STEP, important imbalances become apparent. In the case of these two variables, the number of high SES subjects who scored high in both these areas was substantially greater than the number of low SES subjects. It would seem reasonable to conclude that such disparity between the performance of high SES subjects and low SES subjects in the area of reading and intelligence is likely to influence the results. This influence is commented on in Chapter V.

In order to determine whether the imbalance reported above on the scores obtained by the test sample on the Lorge-Thorndike Test and STEP was a result of chance, an examination was undertaken of the scores obtained by the test population on these two tests (Table V). An examination of Table V reveals that the distribution of scores for the test population indicate the same imbalance thereby ruling out chance as being a factor in the distribution of scores for the test sample.

The total test population consisted of 179 pupils and represented all grade six pupils in the four schools who were present on the day the Proverbs Test was administered. The names of the 179 pupils were listed on data sheets, specifically designed for this study, according to sex and socio-economic



TABLE V  
FREQUENCY DISTRIBUTION OF THE TEST POPULATION  
BY SES, SEX, SEX, READING ACHIEVEMENT  
AND INTELLIGENCE

Test Population		STEP						Lorge-Thorndike Test				
		Reading Achievement Score						Intelligence				
		26 - 35	36 - 45	46 - 55	56 - 65	66 - 75		80 - 95	96 - 110	111 - 125	126 - 140	141 +
SES	Sex											
	Boys	6	7	13	14	1		16	19	6	0	0
	Girls	2	5	13	19	6		16	19	7	3	0
Total		8	12	26	33	7		32	38	13	3	0
HIGH	Boys	0	2	13	20	4		4	16	15	4	0
	Girls	0	0	8	38	8		3	20	21	8	2
	Total	0	2	21	58	12		7	36	35	12	2





status. The names were listed in such a manner as to result in four sets of names. That is, the names of all grade six girls in the two schools representing the high socio-economic area were placed on one set of sheets and the names of all grade six boys in the same school were placed on another set of sheets while the same procedure was followed in listing the children from the low socio-economic areas. The purpose in following this procedure was to assure that an equal number of boys and girls would be included in each socio-economic group since Orton's (1966) study revealed that the girls did better on proverb tests than did the boys. If either of the two socio-economic groups were to have a larger number of girls in it than the other, this imbalance could conceivably influence the final results obtained from the study.

After each name, in the lists referred to above, the following information was recorded: Identification number; scores obtained on the Proverbs Test, abstract, concrete, and total; father's occupation and mother's, if she was employed, were obtained from the student's cumulative records and questioning when deemed necessary, and the numerical rating for this occupation as determined through the use of the Blishen Scale (Blishen, 1961); sex; I.Q. as recorded on each student's cumulative record card; and the raw score and per centile rating each pupil obtained on STEP, also acquired from cumulative records.

Using a table of random numbers, the investigator assigned a number to each student. All student names and their assigned number were then placed in numerical order beginning with the



smallest number and the other following in ascending order. The first twenty-five student names in each card grouping were then established as being those members constituting the sample for the study.

#### THE ADMINISTRATION AND SCORING OF THE CRITERION TEST

The Proverbs Test was administered by the investigator during the third week in June 1968 to the 179 grade six pupils present on the day of testing in the four schools assigned to the study by the Edmonton Public School Board. The main reason for carrying out the testing at this time resulted from the fact that the Proverbs Test was not completed soon enough to permit a much earlier start than that undertaken. Secondly, the June examinations in the four schools had been concluded by this time and the administration of the criteria test did not present an annoying disruption of the normal school routine. As in the case of the pilot study, the answer sheets used in the testing were scored on an IBM 1230 optical scorer supplied by the Division of Educational Research Services at the University of Alberta. The scores on this test, abstract, concrete and total, were then placed on the special data sheet along with all other data gathered for inclusion in the study.

#### STATISTICAL TREATMENT OF DATA

All data obtained on the 100 subjects in the test sample were punched on IBM cards. The information provided by the cards





was subjected to a statistical analysis, carried out by the University of Alberta using programs supplied by the Division of Educational Research Services at the University of Alberta Computing Centre.

Hypothesis I, which predicted that there would be no significant difference between the total scores of low SES students and the total scores of high SES obtained on the Proverbs Test, was tested by means of a multiple linear regression analysis program.

Hypothesis II, which predicted that there would be no significant difference between the abstract scores of low SES students and the abstract scores of high SES students which were obtained on the Proverbs Test, was also tested by means of a multiple linear regression analysis program.

Hypothesis III, which predicted that there would be no significant relationship between the scores the pupils obtained on STEP and the abstract scores the same pupils achieved on the Proverbs Test, was tested by means of the Pearson product-moment correlation.

The variables of SES and sex, and SES and intelligence, were tested for interaction, using both total and abstract scores obtained on the Proverbs Test by means of a multiple linear regression program.

#### SUMMARY

Three tests were used to obtain data on the students used in the study. Two of these, the Lorge-Thorndike Intelligence Test





Level C Form and the Sequential Tests of Educational Progress, Reading Form 4A, had been administered by the schools in the early spring as part of the school system's regular testing program. The other, the Proverbs Test, was administered by the investigator.

The absence of a testing instrument, appropriate for this study, resulted in the construction of a test that provided the criteria. This test became known as Miller's Reading-Proverbs Test. A pilot study was undertaken, in the Edmonton Separate School System, to obtain information on the preliminary test that would enable the investigator to: (1) select for the final test, those items that were considered to be most functional on the basis of a difficulty index, validity index and a biserial coefficient of correlation, and (2) where deemed necessary, to alter responses following each item.

Subjects selected for the study were 100 grade six students from four schools in the Edmonton Public School System. Two of these schools were selected to represent the low socio-economic level and another two for the high socio-economic level. The Blishen Scale was used to rate the individual students within the schools.

All of the data collected was subjected to a statistical analysis by the University of Alberta Computing Centre using programs supplied by the Division of Education Research Services at the University of Alberta.



## CHAPTER V

### THE FINDINGS

This chapter contains the findings of the study. The analysis leading to these findings was carried out in two parts. First, student achievement on the Proverbs Test is reported followed by a report of formal statistical analysis undertaken during which consideration was given to the quantitative aspects of the data collected in the study; particularly data that was subject to this kind of analysis. Secondly, an informal qualitative analysis was made of selected data.

This informal analysis involved an examination of the choices selected by the children in order to determine the percentage distribution of these choices between the correct non-literal, incorrect non-literal, correct literal and incorrect literal, by sex and socio-economic status. In addition to this, a formal examination was made of items on the Proverbs Test in terms of placement within three patterns: (1) those items on which large numbers of members of both groups selected the desired non-literal response, (2) those items on which a low percentage of both groups selected the desired non-literal responses, and (3) those items on which a substantially large percentage of high SES subjects selected the non-literal responses than did members of low SES.

#### STUDENT ACHIEVEMENT

##### MILLER'S READING-PROVERBS TEST

In general, an examination of Table VI reveals that the children from the high socio-economic levels performed better on





TABLE VI

FREQUENCY DISTRIBUTION OF THE TEST SAMPLE BY SES,  
SEX AND THE ABSTRACT, CONCRETE AND TOTAL SCORES  
ACHIEVED BY SUBJECTS ON THE PROVERBS TEST

Miller's Reading-Proverbs Test																																																	
Test Sample		Abstract Score												Concrete Score								Total Score																											
		0 - 15				16 - 30				31 - 45				46 - 60				0 - 4				5 - 8				9 - 12				13 - 16				0 - 15				16 - 30				31 - 45				46 - 60			
		S's	%	S's	%	S's	%	S's	%	S's	%	S's	%	S's	%	S's	%	S's	%	S's	%	S's	%	S's	%	S's	%	S's	%	S's	%	S's	%	S's	%														
L O W	SES	Sex	2		5		10		8		17				4		3		1		0		0		7		10		8																				
			2		7		4		12				3		0		0		4		9		12																										
	Total	4	8	12	24	14	28	20	40	34	68	7	14	8	16	1	2	0	0	11	22	19	38	20	40																								
H I G H	SES	Sex	0		2		13		10		23		2		0				0		0		0		1		9		15																				
			0		0		6		19		24		1		0		0		0		0		3		22																								
	Total	0		2		19		29	58	47	94	3	6	0	0	0	0	0	1	2	12	24	37	74																									



the Proverbs Test than did children from the lower social and economic strata. Although the statistical analysis (Table VIII and IX) indicated that the difference in this regard was not significant, it is, non-the-less, interesting to note what appears to be a fairly substantial gap.

Table VI would seem to indicate that children in this study of high SES have a greater tendency to select the non-literal, abstract response than do those children from low socio-economic areas. Forty per cent of the low SES subjects' abstract score fell within the top interval of 46-60 while 58 per cent of the high SES subjects' abstract score fell within the same interval.

The figures presented in Table VI take on more import when we examine the total scores. In this instance, we find that the percentage figures for the low SES in the fourth interval remains the same with 40 per cent placing within this level of performance. However, there is a substantial change in the percentage of high SES subjects who rate in the top interval with a figure of 74 per cent.

An explanation for this change in the figures for the high SES subjects appears to be that a number of high SES subjects who ranked in the third interval, when one considers the abstract score, had scores that fell just short of placement in the fourth interval. Thus a small concrete score resulted in a change in placement for the total score.

In order to assure that the distribution of scores of the



test sample presented in Table VI was not a result of chance the scores of the test population were assembled and are presented in Table VII in the same manner as the test sample scores in Table VI. A comparison of the figures in both tables reveals that the same or very nearly the same percentage distribution of scores prevails. That is, 38 per cent of the low SES subjects place in the fourth interval when considering the abstract scores and total scores, while 59 per cent of the high SES group place in the fourth interval of the abstract score and 72 per cent in the fourth interval of the concrete score.

#### STATISTICAL ANALYSIS

Hypothesis I and II and data on SES, Sex and Intelligence, which were examined for interaction, were subjected to a multiple linear regression program. Hypothesis III was tested by using the Pearson product-moment correlation.

#### HYPOTHESIS I

There will be no significant differences in the total reading proverbs score obtained on the Miller's Reading-Proverbs Test by grade six children in the lower socio-economic group and the scores of grade six children from the high socio-economic group when adjustments have been made for sex.

The data relevant to the above were submitted to a multiple linear regression analysis and generated an F ratio of .0722 and  $p=.78884$  (Table VIII). Such results point to a very





TABLE VII

FREQUENCY DISTRIBUTION OF THE TEST POPULATION BY SES,  
SEX AND THE ABSTRACT, CONCRETE AND TOTAL SCORES  
ACHIEVED BY SUBJECTS ON THE PROVERBS TEST

Test Population		The Proverbs Test																							
		Abstract Score								Concrete Score								Total Score							
		0 - 15		16 - 30		31 - 45		46 - 60		0 - 4		5 - 8		9 - 12		13 - 16		0 - 15		16 - 30		31 - 45		46 - 60	
SES	Sex	S's	%	S's	%	S's	%	S's	%	S's	%	S's	%	S's	%	S's	%	S's	%	S's	%	S's	%	S's	%
LOW	Boys	7		9		12		13		25		7		6		3		0		15		13		13	
	Girls	2		12		11		20		32		5		7		1		0		6		19		20	
	Total	9	11	21	24	23	27	33	38	57	66	12	14	13	15	4	5	0	0	21	24	32	38	33	38
HIGH	Boys	0		6		15		18		32		4		3		0		0		3		13		23	
	Girls	0		0		17		37		51		3		0		0		0		0		10		44	
	Total	0	0	6	6	32	35	55	59	83	89	7	8	3	3	0	0	0	0	3	3	23	25	67	72



low level of significance and as a consequence, provides fairly substantial support for the null hypothesis. It should be stated, at this point, that these results run contrary to what had been expected as a result of the investigation. However, by referring ahead to the analysis made of the relationship that exists between socio-economic status and intelligence (Table VIII and IX) one may gain some insight regarding the investigations outcome relative to this first hypothesis. An examination of both tables reveals that the relationship between these two variables is an important one. In Table VIII, the significance of the relationship is noted at the .05 level while Table IX reveals a correlation between socio-economic status and intelligence of .5760. The inclusion of data on two variables already possessing strong ties in a hypothesis to be examined points to the probability that any analysis undertaken to determine the relationship between one of these variables and the criteria variable will more than likely be highly influenced by the preceding relationship.

There is, though, a question that arises and which requires some consideration. It was reported earlier in the chapter that the study undertaken by Cropley pointed to the substantial superiority in verbal skills on the part of children from upper socio-economic levels. It also pointed to this superiority as a major contributor to the significant differences between their scores on the full-scale and those of children in the lower socio-economic levels. If this be the case, the question then





TABLE VIII

SIGNIFICANCE OF RELATIONSHIP BETWEEN SES AND SEX, SES  
AND INTELLIGENCE AND SES AND THE PROVERBS  
TEST, USING SUBJECTS' ABSTRACT AND  
CONCRETE SCORES AS CRITERIA

	Total Score		Abstract Score	
	F-Ratio	Probability of Occurrence	F-Ratio	Probability of Occurrence
Interaction:				
SES and Sex	.9497	.33212	.7936	.37511
SES and Intelligence	4.6721	.03317 *	4.2918	.04101
Proverbs Test and SES	.0722	.78884	.5685	.45279

\* Significant at the .05 level



occurs as to why children of high socio-economic status do not do significantly better on a test which appears to require such skills than do the children of low socio-economic status. One answer may be in the fact that the vocabulary of the responses was held at the grade four level which may have made it possible for grade six pupils of lower intelligence to cope adequately with the verbal requirements. However, this does not in itself provide an adequate answer since it does not take into consideration the interpretive requirements demanded by such reading material. It is possible that the real answer to this lack of significant difference in the performance of the low and high SES groups lies in what has been pointed out in Chapter II; mainly that proverbial language is primarily the language of the common people, those members of society who are found at the lower levels of the socio-economic stratification within a society.

From this we might conclude that the scores of children of low SES on a proverbs test will not differ significantly from the scores of high SES children on the same test. Credence is given to this conclusion with the finding that Hypothesis I is upheld.

## HYPOTHESIS II

There will be no significant differences in the abstract reading proverbs scores obtained on the Miller's Reading-Proverbs Test by grade six children in the lower socio-economic group and the scores of grade six children from the upper socio-economic



group when adjustments have been made for sex.

It will be noted that except for the substitution of an abstract score for a total score as criteria, this hypothesis is identical to Hypothesis I. Since the primary concern of this study centres around differences in ability of children from low and high socio-economic status to function in the area of verbal abstraction, it could be said that this hypothesis provides the crucial analysis. Even though the first hypothesis produced results that were far from significant, the possibility still remained that the substitution of abstract scores for total scores may lead to results that have statistical significance. However, this did not prove to be the case, and even though there was a substantial change in the F ratio to .5685, the p was .45279 which is still far removed from being significant. What has been said regarding the lack of significance in the previous hypothesis would have similar application here. Hypothesis II was upheld.

### HYPOTHESIS III

There will be no significant correlation between the scores obtained by grade six children on the Sequential Tests of Educational Progress, Reading Form 4A and the abstract scores obtained by the same children on Miller's Reading-Proverbs Test.

An examination of the correlations obtained on the various variables used in the study (Table IX) reveals that a Pearson correlation of .7388 was generated when the scores obtained by the children in the study on STEP were compared to





TABLE IX  
PEARSON PRODUCT-MOMENT CORRELATIONS BETWEEN SES, SEX  
AND SUBJECTS' SCORES ON THE LORGE-THORNDIKE  
TEST, THE PROVERBS TEST AND STEP

	SES	Sex	I.Q.	Proverbs Test		STEP
				Total Score	Abstract Score	
SES	1.0000	0.0193	0.5760	0.3816	0.3930	0.4322
I.Q.		0.1517	1.0000	0.6547	0.6153	0.6927
Total Score		0.2114		1.0000	0.9809	0.7577
Abstract Score		0.1876			1.0000	0.7388
STEP		0.2178				1.0000
Sex		1.0000				



the abstract scores the same children on the Proverbs Test. A correlation of this magnitude impressively supports rejection of the hypothesis presented and indicates that the relationship is indeed a significant one. This then means that the scores a student obtains on STEP may provide the basis for a prediction of just how well or poorly a particular student might do on the Proverbs Test. Hypothesis III then is rejected.

#### INTERACTION OF VARIABLES

Although primary concern of the study was directed toward the investigation of the significance of relationships that may exist between the total and abstract scores obtained on the Proverbs Test by children in the study and the socio-economic status of these same children, it was considered to be of prime importance to determine whether significant relationships were evident between other variables used in the study. Should any relationships of importance be present, they could bear considerable influence on the results obtained in the analysis of the data as established in the hypotheses.

#### SOCIO-ECONOMIC STATUS AND SEX

The variables of socio-economic status and sex were subjected to a multiple linear regression analysis using both the total scores and abstract scores obtained by children in the study on the Proverbs Test as criteria. The results in both cases, using total score and abstract score, revealed that the relation-





ship between socio-economic status and sex was not significant. When the total scores on the Proverbs Test were used as criteria, an F ratio of .9497 and a  $p=.33212$  was obtained (Table VIII). Substitution of the abstract scores for the total scored resulted in similar findings with an F ratio=.7936 and  $p=.37511$ . In each instance, the results revealed that whatever relationship may exist between socio-economic status, sex and performance on the Proverbs Test, the relationship, for statistical purposes was an insignificant one.

#### SOCIO-ECONOMIC STATUS AND INTELLIGENCE

As in the case of socio-economic status and sex, the data for the variables of socio-economic status and intelligence were subjected to a multiple linear regression analysis using the total scores and abstract scores obtained on the Proverbs Test by the children in the study as criteria. Interestingly enough, the analysis produced results revealing that there was indeed a significant relationship between socio-economic status, intelligence, and the scores, both concrete and abstract, of the children on the Proverbs Test. Using the total scores as the criteria led to an F ratio = 4.6721 and a  $p = .03317$ , while the use of the abstract scores produced an F ratio = 4.2918 and a  $p - .04101$  (Table VIII). These results point to a statistical significance in both instances at the .05 level.

Significant as this finding was to the present study, it proved to be a far from unique discovery. The subsequent search for studies exploring this relationship revealed an enlightening



study undertaken by Cropley (1963) to examine whether socio-economic status was significantly related to the development of intelligence. This investigation was carried out with children from the Edmonton Public School Board between 1961 and 1963. The Wechsler Intelligence Scale for Children was used to obtain measures of intelligence while socio-economic status was established through the combination of scales constructed to rate parental occupation, their education and the "general goodness" of the home environment. This study produced results which indicated that children of high socio-economic status achieved results on the intelligence scale that were significantly higher than the results obtained by children who measured low on the socio-economic scale.

One aspect of Cropley's investigation which appears to be of particular importance to the present study is the finding that the significant difference which was obtained is, in whole, attributed to the superior performance of the children of high socio-economic rating on the sub-tests which required verbal skills. Although a substantial case may be made in support of contentions that this section of the test, and others like it, favor children of high SES groups, it must be kept in mind that it is precisely these kinds of skills which are important to the achievement of success in reading within school systems which tend to be middle-class oriented in terms of curriculum, goals and instructional personnel. On those sub-tests requiring performance skills for success, the difference in the scores between these two groups was not significant. However, the





superior performance of children from the high socio-economic group on the verbal portion of the intelligence test was of sufficient magnitude to maintain a difference between the Wechsler Intelligence Scale for Children full-scale scores of the two groups that had statistical significance at the .01 level.

An analysis of the intelligence scores of members of the test sample reveals a distribution tendency that bears out the results of Cropley's study. Table IV indicates a frequency distribution of intelligence by sex and SES of the test sample using an interval of 15 points. Using the first two intervals, between 80 and 110, as the first basis of comparison between low SES pupils and high SES pupils some interesting figures become evident. On this basis it is found that 82 per cent of the low SES group are at this level of intelligence while only 32 per cent of the high SES grouping fall in this category. Eighteen per cent of the low SES sample would rate as above average while 68 per cent of the high SES group are of above intelligence. It could also be of interest to note that of the high SES sample 80 per cent of the girls are above average intelligence while only 56 per cent of the boys rank above average.

Such results as above add support to the findings shown on Table VIII and point to a relationship between intelligence and SES that is of sufficient magnitude to effect the statistical significance of the relationship being examined between one of these variables and the criteria scores. In other words, the relationship between intelligence and SES is a significant one





and as such, dictates that SES and intelligence be given equal consideration when endeavoring to formulate explanations for the lack of significant relationship between SES and the total and abstract scores obtained by both groups on the Proverbs Test.

#### INFORMAL ANALYSIS

As was indicated earlier, an attempt was undertaken to make a qualitative analysis of the results obtained on all of the children in the study. An analysis was made of the choices made by the children in terms of sex and socio-economic status (see Table X). In other words, it was undertaken to determine whether relationships appeared to exist between a student's sex, socio-economic status and the responses selected. In addition to this, an analysis was made of selected items in the Proverbs Test in an effort to determine whether the structure of the proverbs and their responses might have tended to influence the responses made by the children.

An examination of Table X provides another kind of view of the performance of both groups on the Proverbs Test used in the study. In this instance, the total number of each of the four kinds of responses used in the test and selected by the subjects in the study was compiled on the basis of sex and socio-economic status. The results show a substantial disparity in the percentage selection of correct non-literal responses made by the low SES subjects and the percentage selection of the same kind of response made by the high SES pupils. The results indicate more specifically that children of high SES status



have a greater tendency to select the correct non-literal response than do children of low SES.

Orton's (1966) study revealed that the performance of girls on a proverbs test requiring the selection of one response from four given, was significantly better than that for boys. Although the data for this study was not subjected to a similar statistical analysis to determine whether the same relationship was present for subjects in the study, an examination of Table X indicates that in both socio-economic groups the girls tended to perform more successfully in their selection of the correct non-literal response than did the boys.

It is of interest to note (Table X) that in each sub-grouping, that is by boys and girls within each socio-economic level, the second largest percentage of choices made by the subjects was that of the incorrect non-literal response. From this it might be suggested that the tendency to select a non-literal response persisted in spite of the presence of a correct literal response. This fact could conceivably lead to the conclusion that, in general, the facility shown by all children in the study to successfully manipulate verbal abstractions in such an integral part of their mental process that it is persistent to the point of being wrong. However, it must be pointed out that the directions that were presented with the test specifically directed the pupils attention to the fact that the concern on the exercise was to obtain the special meaning intended by the proverbs. This conditioning in the direction in itself undoubtedly played an important role in decisions





TABLE X

TOTAL NUMBER OF EACH RESPONSE SELECTED BY BOYS AND  
GIRLS OF DIFFERING SES ON THE PROVERBS TEST AS  
RELATED TO TOTAL RESPONSES POSSIBLE

Response	Low Socio-Economic Status					
	Boys		Girls		Total	
	No. Resp.	% of Total	No. Resp.	% of Total	No. Resp.	% of Total
Correct Non-literal	442	58.93	485	64.67	927	61.80
Incorrect Non-literal	144	19.20	121	16.13	265	17.66
Correct Concrete	111	14.80	102	13.60	213	14.20
Incorrect Concrete	53	7.07	42	5.60	95	6.34
Total	750	100.00	750	100.00	1,500	100.00
Response	High Socio-Economic Status					
	Boys		Girls		Total	
	No. Resp.	% of Total	No. Resp.	% of Total	No. Resp.	% of Total
Correct Non-literal	548	73.07	622	82.93	1,170	78.00
Incorrect Non-literal	111	14.80	74	9.87	185	12.34
Correct Concrete	69	9.20	46	6.13	115	7.66
Incorrect Concrete	22	2.93	8	1.07	30	2.00
Total	750	100.00	750	100.00	1,500	100.00



made to persist on selecting the non-literal response.

Previous mention was made of the decision to select two test items from the pilot project, that had been shown to pose little difficulty for the subjects, to serve as easy starters on the Proverbs Test. It was reasoned that the inclusion of two easy items on the test, to follow the samples given in the directions, would serve as additional assurance that the students were aware of what was expected of them. It will be remembered that it was stated earlier that easy items were identifiable by their difficulty of index number. The bigger this number, the easier the item was analyzed to be, indicating that the item was correctly answered by the majority of pupils. Items number one and two on the Proverbs Test were selected from the pilot project to serve this purpose as they had a difficulty index of .919 and .901 respectively which rated them as the easiest of the sixty items in the pilot study. An examination of the data in this study reveals that, of the 100 subjects who participated in the study, ninety-six selected the correct non-literal responses in both items on the Proverbs Test and thus stands as substantial support for their selection as easy starters.

Six test items were selected from the Proverbs Test for an in-depth analysis. The requirements of three patterns:

- (1) those items for which a very large percentage of both groups selected the figurative or non-literal meaning of the proverbs,
- (2) those items for which a low percentage of both groups selected the non-literal meaning of the proverb, and
- (3) those items for which a substantially larger percentage of pupils, who



were members of the high SES group, selected the desired non-literal response than did those students who were members of the low SES group (Table XI).

There was no item on which the low SES subjects did better than the high SES subjects.

#### Pattern One

It was determined that 90 per cent or more of the subjects within both groups had to select the correct non-literal response of an item for that particular item to meet requirements of the pattern. Test items one and two of the Proverbs Test were found to meet the requirements of this pattern. That is, 90 per cent or more of both groups selected the figurative or non-literal meaning of the proverbs (Table XI).

1. DO NOT COUNT YOUR CHICKENS BEFORE THEY HATCH.
  - (A) Every egg hatches into a chicken.
  - (B) Always plan on getting what you think is coming to you.
  - (C) If you have ten eggs, you may not hatch ten chickens.
  - (D) Don't depend on receiving anything until you get it.
  
2. DON'T CRY OVER SPILLED MILK.
  - (A) It doesn't do you any good to worry about things that have already happened.





TABLE XI

PERCENTAGE DISTRIBUTION OF CHOICES BY SES MADE  
ON SELECTED ITEMS FROM THE PROVERBS  
TEST BASED ON THREE PATTERNS

Test Items	Correct Non-Literal		Correct Literal		Incorrect Non-Literal		Incorrect Literal	
	Low SES	High SES	Low SES	High SES	Low SES	High SES	Low SES	High SES
Set I								
Item 1	96	96	2	2	2	2	0	0
Item 2	94	98	6	2	0	0	0	0
Set II								
Item 7	28	24	58	66	8	4	6	6
Item 20	32	40	40	38	12	14	16	8
Set III								
Item 16	50	88	6	2	36	6	8	4
Item 28	52	88	12	2	28	10	8	0



- (B) Always cry when you spill things.
- (C) You shouldn't cry when you spill milk.
- (D) Never stop worrying about the past.

In item one, the desired non-literal response is response (D) and 96 per cent of both SES groups selected this response. In item two, 94 per cent of the low SES group and 98 per cent of the high SES group correctly selected response (A) which is the desired non-literal response.

An examination of these items reveals that two factors may have been influential in obtaining these results. First of all, it is possible that these two proverbs are well known and commonly used in our society today. Secondly, the grammatical structure of the proverbs may have been influential. For example: Both proverbs are negative statements beginning with "do not" or "don't" while the correct desired non-literal response for each item contain negatives.

In addition to what has been pointed out above, it should be noted that both of the proverbs appear to have a substantial concrete base and are associated with reality. That is, they are easily visualized since they are based on tangible objects and situations. It would appear reasonable to assume that most children who reach the sixth grade have had some experience with birds hatching from eggs, whether the experience be real or vicarious via television or school lessons. And it is also probable that most, if not all, children have at one time or another in their childhood spilled milk.





Riessman (1962), discussed in Chapter II, pointed out that children of low SES were able to engage in abstract thinking but relied on close associations with the concrete in order to engage in this kind of mental process. The two proverbs chosen to represent this pattern appear to have met the criteria set out by Riessman that would assure children of low SES an opportunity to successfully engage in abstract thinking.

No other item on the Proverbs Test was able to meet the percentage requirements established for acceptance in this pattern.

#### Pattern Two

To meet the requirements of this pattern, an item had to produce results showing that 40 per cent or less of the membership in each SES group successfully selected the desired non-literal response. The results obtained for items seven and twenty of the Proverbs Test best exemplified the requirements of this pattern. A low percentage of members in both groups selected the figurative or non-literal response for the proverb (Table XI).

#### 7. MONEY BURNS A HOLE IN HIS POCKET.

- (A) When you have money in your pocket it's  
difficult to pass by a store without spending  
it.
- (B) There are more people who save money than  
spend it.
- (C) Some people never seem to be able to make things  
last.
- (D) It isn't hard to keep something for a long  
time.



20. EASY COME, EASY GO.

- (A) He spent all the money because he didn't have to work to get it.
- (B) The easier it is to get things, the more you appreciate them.
- (C) The easier it is to earn money the harder it is to spend.
- (D) You appreciate things more if you've worked hard for them.

The desired non-literal response is (C) in item seven and (D) in item twenty.

Item seven produced the lowest percentage choice of the non-literal response by the members of the low and high socio-economic groups with 28 per cent and 24 per cent respectively while item twenty produced a distribution of 32 per cent and 40 per cent respectively. The members of both groups demonstrated a tendency to resort to the correct literal response in answering both items. A possible explanation for these results lies in the use of the word "money" in the correct literal response of both items and particularly its presence in the proverb used in item seven. This combines with a tendency to place considerable emphasis on the importance of monetary considerations in our society, regardless of socio-economic level, was undoubtedly demonstrated in the childrens' selection.

There is a possibility that the proverbs in items seven and twenty are most frequently used in our society specifically in relation to money. This being the case, we may have here an



additional explanation for the results obtained in regards to this item.

As in pattern one, no other item was found to meet the criteria established for this pattern.

### Pattern Three

Criteria for inclusion in this pattern dictated that 55 per cent or less of low SES subjects and 85 per cent or more of high SES subjects select the desired non-literal response of an item.

Test items sixteen and twenty-eight of the test were selected, on the basis of the results, to represent items on which the performance of the children of low SES was substantially below that of those children of high SES.

16. NECESSITY IS THE MOTHER OF INVENTION.

- (A) Invention's mother is called Necessity.
- (B) When you want to do something bad enough  
a way can be found to do it.
- (C) When children need something they usually  
ask their mother to get it for them.
- (D) If anything you need to do is difficult  
don't try to do it.

28. HE COMPLETELY TOOK THE WIND OUT OF MY SAILS.

- (A) When his boat got in our way his sail kept  
the wind from our sails.
- (B) He wasn't able to catch us with his boat.
- (C) His action took me by surprise.





(D) Most people are ready for anything that might happen.

In item sixteen, response (B) is the desired non-literal response while in item twenty-eight (C) is the desired response.

Here we have proverbs that appear to stray from the concrete in that they do not have concrete referents within themselves which may be easily visualized. For example: The proverb "Don't count your chickens before they hatch" would seem to be based on a very concrete and easily visualized situation upon which to make the abstract venture whereas the proverb "Necessity is the Mother of Invention" does not have an as easily visualized concrete format, and requires the exercise of a more complex thinking process.

On the basis of what Riessman (1962) has proposed, it would seem reasonable to conclude that the more removed the proverb is from the concrete the more difficulty the low SES subjects will experience in selecting the desired non-literal response. The results obtained on the two items in this pattern would appear to provide support for such a conclusion. Thus, we have here the interesting possibility of an undertaking that would have as its goal, a further specific exploration of a question involving the ability of low SES pupils to engage in abstract thinking.

No other item was able to meet the criteria set for placement in this pattern.

Although the remaining twenty-four items did not produce results sufficient to warrant placement in any of the patterns,



there were indications in these results that all possess a trend toward one of the patterns. In this regard, sixteen tended to meet the requirements set for pattern one, two for pattern two and six for pattern three.

### SUMMARY

The data obtained for this study was subjected to a formal analysis and an informal qualitative analysis.

Data pertaining to the students' achievement on the Proverbs Test was first compiled and examined for any noticeable differences in the scores of both the low and high SES.

Hypothesis I and II were subjected to multiple linear regression analysis. In the case of both hypothesis, the results were supportive showing that the relationship between the childrens' scores, total and abstract, on the Proverbs Test and their established SES were insignificant.

Hypothesis III, which examined the relationship between the total scores obtained by the children in the study on the proverbs test and the scores obtained by the same children on STEP, was rejected as the relationship between the variables being examined revealed a Pearson correlation of .7388 which was of sufficient magnitude to warrant this rejection.

Consideration was also given to whether there was any significant relationship between variables in the study that did not constitute the primary concern of the study. Such relationships are referred to as interaction. The relationship between SES and Sex was found to be insignificant. However, the relation-





ship between SES and Intelligence proved to be of statistical significance with literature revealed a study carried out by Cropley (1936) in the city of Edmonton which undertook an investigation of the relationship between socio-economic status and the development of intelligence. His findings revealed that children of high SES obtained results on an intelligence scale that were significantly higher than the results obtained by children of low SES. An examination of the distribution by intelligence and SES of children of low SES and children of high SES.

An informal analysis was made of the relationship between the subjects' sex, SES and the responses selected. Minor differences were found between the percentage of choices selected the sex of the respondents. Although the relationship between the scores, total and abstract, obtained by the children in the study on the Proverbs Test and their SES was found to be insignificant, the percentage distribution of their choices by SES reveals that there was a substantial difference between the percentage of lower SES subjects and high SES subjects selecting the preferred non-literal responses.

Six items were selected for an informal analysis of their structure in order to determine the reason for the percentage distribution of choices based on three patterns:

- (1) Those on which a large percentage of members of both SES groups selected the preferred non-literal response.



- (2) Those on which a small percentage of members of both SES groups selected the preferred non-literal response, and
  - (3) Those on which a substantially larger percentage of members of high SES selected the preferred non-literal than did the members of low SES.
- Various reasons were advanced for the above patterns of distribution.



## CHAPTER VI

### CONCLUSION

Chapter VI is the concluding chapter. It has six objectives as its goal:

1. A summary of the study
2. A brief review of the finding and a proffering of conclusions based on the findings
3. An examination of the general implications the findings have for the educator
4. Statements regarding limitations within the study
5. A presentation of recommendations for further study
6. A concluding statement.

### SUMMARY

This study undertook to investigate whether there was a relationship between socio-economic status of grade six children and their ability to interpret proverbs. The population for this study was taken from the total grade six population of the Edmonton Public School System. Socio-economic status was determined by using information on parental occupation, obtained from class records, and the use of the Blishen Scale. Criteria scores, total and abstract, were determined by student achievement on the Proverbs Test, a test constructed by the investigator for the study. Intelligence scores, based on the Lorge-Thorndike





Test, and the reading scores, based on STEP, were obtained from class records.

The test sample of 100 students was randomly selected from the test population of 179 students.

Data obtained from the test results were subjected to a formal and an informal analysis. Formal analysis was carried out by the Division of Educational Research Services by subjecting the null hypotheses to a multiple linear regression program and Pearson product-moment correlation.

## FINDINGS AND CONCLUSIONS

The results of the formal analysis are examined in this section along with the conclusions engendered by these results. The informal analysis, which follows the formal, seeks to provide explanations and suggestions related to the results of the formal analysis.

### Hypothesis I

There will be no significant differences in the total reading proverbs scores obtained on Miller's Reading-Proverbs Test by grade six children in the lower socio-economic group and the scores of grade six children from the high socio-economic group when adjustments have been made for sex.

The F ratio obtained when the data are subjected to a multiple-linear regression program indicates that the relationship between SES and the total achievement scores earned by the students in the study on the proverbs test is not a significant one. Thus, Hypothesis I is upheld.



## Hypothesis II

There will be no significant differences in the abstract reading proverbs scores obtained on Miller's Reading-Proverbs Test by grade six children in the lower socio-economic group and the scores of grade six children from the upper socio-economic group when adjustments have been made for sex.

The F. ratio pointed to a relationship between SES and the abstract achievement scores obtained by students in the study on the proverbs test that wasn't significant. Therefore, Hypothesis II is upheld.

From the results obtained in the analysis of Hypothesis I and II, it is concluded that a student's SES does not play a role in determining the total score or abstract score a student attains in undertaking a proverbs test. In other words, it is not possible, on the basis of knowledge concerning a student's SES, as gathered in this study, to predict how well a student will do on the Proverbs Test.

## Hypothesis III

There will be no significant correlation between the scores obtained by grade six children on the Sequential Tests of Educational Progress, Reading Form 4A and the abstract scores obtained by the same children on Miller's Reading-Proverbs Test.

The data set out by Hypothesis III was subjected to an analysis which provided the Pearson product-moment correlation between the scores students obtained on STEP and the abstract scores they obtained on the proverbs test. A correlation of .7388 was derived which is of sufficient magnitude to indicate





the presence of a significant correlation between STEP scores and the abstract scores on the Proverbs Test. Hypothesis III is therefore rejected.

The results of the analysis undertaken involving Hypothesis III lead to the conclusion that the score a student attains in doing STEP provides a sound basis upon which to predict his/her abstract score on the Proverbs Test. That is, if a student scores high on STEP, it is reasonable to suggest that the same student will obtain a high abstract score on this proverbs test.

### Interaction

Data obtained in the study was subjected to an interaction analysis to determine whether there was a significant relationship between variables, other than criteria scores, used in the study; in particular SES and Sex and SES and Intelligence. This interaction was examined using the total and abstract scores achieved by the students on the Proverbs Test.

The relationship between SES and Sex was not a significant one regardless of whether the criteria score used in the analysis was the students' total or abstract achievement score obtained on the Proverbs Test. However, a statistically significant relationship was revealed between SES and Intelligence when either the total or the abstract achievement score was used in the analysis. The result in both instances was significant at the .05 level of confidence. This leads to the conclusion that the significant relationship demonstrated between SES and Intelligence must be given serious consideration when formulating statements that



endeavor to explain the relationship that exists between SES and achievement scores obtained by students on a proverbs test. That is, when informal analysis is made of data in the study, the results of which point to any particular characteristic as being associated with SES, it must be noted that this association may be as much a function of intelligence as it is of SES. This directs attention to the expediency of exercising stringent controls on intelligence scores when examining relationships between SES and student performance.

### Informal analysis

An examination of the percentage distribution of choices made by the students in the study showed that high SES students selected a larger percentage of correct non-literal responses than did pupils who were rated as being of low SES.

Although there is no evidence to indicate a statistical significance in the difference between the number of correct non-literal responses selected by the students of low SES and the number of the same kind of responses selected by high SES students, an examination of the variance of test achievement, in terms of percentage figures, reveals that the difference in student group performance is impressive enough to encourage further consideration. In other words, the difference suggests that attention be directed to possible improvement in the performance of low SES subjects, keeping in mind the relationship between SES and intelligence, with a view to reducing the percentage disparity in the performance that presently exists between these two groups.



The above suggestion is provided additional impetus when consideration is given to earlier suggestions that low SES pupils may be able to engage in abstract thinking when material requiring interpretation is closely linked with the concrete. That is, reading material that is readily visualized and within the bounds of realism.

A further examination of the distribution, referred to above, shows that girls in both groups obtained higher scores on the Proverbs Test than did the boys within each SES group lending support to Orton's (1966) finding that grade six girls performed significantly better on a proverbs test than did boys.

Two proposals are generated by the above findings. First of all, investigations that set out to seek the reasons for the disparity in performance between boys and girls may prove quite rewarding. Secondly, that it would seem prudent to be aware of this difference when confronted with a group of boys and girls with a view to the establishment of expectations that realistically parallel the performance that might be expected of boys and of girls.

An analysis of the choices, other than those which constituted the correct non-literal response, made by the students, revealed that the largest percentage of choices was that of the incorrect non-literal response. This means that where a student did not select the correct non-literal response, the tendency was to select the incorrect non-literal response.

The fact that incorrect non-literal responses accounted for the second largest number of choices, points to two





possibilities. Either the directions that were given prior to administration of the test conditioned the pupils to concentrate on responses that were obscure and appeared unusual or there was a genuine, though not fully developed, capacity to engage in abstract thinking.

An analysis was made of the test results with an attempt to categorize the students' choices on the basis of three patterns; (a) those test items on which a large percentage of members of both SES groups (90% or more) selected the correct non-literal response, (b) those test items on which a small percentage of members of both SES groups (40% or less) selected the correct non-literal response, and (c) those test items on which a substantially larger percentage of high SES members (85% or more) selected the correct non-literal response than did the members of the low SES (55% or less). Only two items for each of the three patterns met the criteria that were finally established. However, each of the remaining twenty-four test items, though falling short of the criteria, displayed a tendency to favor one of the three patterns.

Although the attempt to categorize the students' choice in keeping with the three patterns selected for analysis was not as rewarding as might have been hoped for, the ensuing results demonstrated that categorization, on the above basis, may be achieved through a careful restructuring of the proverbs test.



## IMPLICATIONS

The implication of these findings for the educator would seem to be twofold.

In the first place, the educator, as a "curriculum maker", must be alerted to a very real possibility that there is a need for the development within the framework of the total school program at the upper elementary level and beyond, of programs specifically designed to aid children in these grades acquire the experiential background essential to meaningful interpretation of reading materials that employ the technique of figurative language. The "curriculum maker" should be prepared to analyze the reading texts that are presently being used in order to determine the extent to which figurative language is employed. He should also be prepared to analyze the guides and workbooks that accompany these readers in order to determine the extent to which they meet the demands set by the non-literal content of the readers. In addition to this, he should be prepared to investigate the reading materials employed in other subject areas to determine how extensive is the use of figurative language.

Having undertaken the examination outlined above, the "curriculum maker" should be prepared to undertake the development of programs that will supplement the existing reading program to the degree that they appear to be deficient in the promotion of concepts and skills employed in the interpretation of figurative language. He should also see that provision is made to assure that these skills are equally applied to the content area. This implies an extension of the reading program into the content





area where the skills would be given further re-inforcement through their application to reading materials of these areas.

A second implication, and perhaps the more important one, the findings of this study have for the educator is that children of low SES, who tend to be of lower intelligence as measured by today's testing instruments, possess the capability of coping with abstract language. A qualification being that in doing so they are more dependent on the abstract being closely linked with concrete referents than are children of high SES who tend to be of higher intelligence.

#### LIMITATIONS

Middle-class bias may have played an influential role in the construction of the proverb test used in the study and thereby influenced the outcomes of the study. Although it was felt that such bias may possibly have been controlled by the fact that the items that constitute the Proverbs Test were selected from a sixty item test used in the Pilot Project, which was set-up to simulate the study, there is sufficient reason to justify the exercise of caution and a reiteration of bias as a possible limitation.

A second limitation becomes evident in a concern as to whether the schools used in the study were able to provide as good a sampling of the SES groups as would have been preferred. A careful examination of the circumstances surrounding the selection of schools to be used in studies provides an answer as to how this may occur.



First of all, the two school systems have, in recent years, become inundated by requests to use schools in their respective systems to carry out research projects. This, combined with the fact that the majority of these requests occur about the same period of the school year, creates a real problem in terms of the number of schools available for use; particularly when requests are for specific kinds of schools. Secondly, there is not available to administrators, a reliable and readily applied measure of SES for requests such as that made by this study. Therefore, a need is created to rely solely on individual judgement in determining what constitutes a school that is representative of either low or high SES. This problem becomes even more complicated when one considers that Edmonton has two school systems, consequently, each school in both systems must, of necessity, cover a larger geographical area than would be the case were there only one system. This tends to produce a school population that has an above normal distribution of socio-economic levels within the school thereby limiting the number of subjects within a specific socio-economic level upon which to draw.

A third limitation is related to the use of socio-economic scales. The employment of scales which undertake to make even a superficial examination of the home environment can cause a real problem for the investigator since school system administrators, and the boards that employ them, are extremely sensitive to investigations which might, even though remotely, be said to constitute an invasion of privacy. Thus, there is an ever





increasing resistance to provide anything more than the information that is available on cumulative record cards. Even this concession is coming under closer scrutiny and generating dissent.

Because of the above, an investigator is severely limited in his choice of instruments to measure SES. This limitation reaches an even greater magnitude when an investigator seeks to select a scale that has been based on Canadian Standards. On this basis alone, the choice is extremely restricted.

#### SUGGESTIONS FOR FURTHER RESEARCH

The most obvious possibility for further research, and probably the most promising, develops from two considerations. First of all, that children who are of low SES may develop a dependency pattern which could govern the extent to which they are able to think abstractly. Secondly, there is a significant relationship between SES and intelligence. With these in mind, it is suggested that a test be prepared in which there are equal numbers of items corresponding to pattern one (concrete) and pattern three (abstract) in the Proverbs Test. Such a test would then be administered to children of low and high SES, while exercising stringent controls on intelligence, in an effort to determine whether there is a tendency on the part of any members within the study to rely on concrete referents when engaged in abstract thinking and, if such a characteristic is evident, whether it bears a significant relationship to either SES or intelligence.





An investigation which holds promise and may prove valuable, would be the initiation of a study which would undertake to examine the difference in the achievement performance on a proverbs test between boys and girls.

In view of the fact that proverbs in this study were only presented in isolation suggests that further investigations be undertaken with the use of a proverbs test in which the proverb is embedded in the context of a paragraph. For example: A situation is presented in a paragraph which prompts a protagonist to use the proverb. The student is then required to select, from responses given, the one which best exemplifies the proverb used in the paragraph.

Another possibility for further investigation would be to explore the developmental aspect of childrens' ability to function with abstract language. More specifically, it is suggested that a study be undertaken in which a proverbs test is administered to children of grade four, five and six. First of all, to a normal population for which no controls or adjustments have been made and then to children who have been selected on the basis of low and high SES with adjustments made for intelligence. The purpose would be to determine whether there is any significant change in achievement performance (1) within a normal population from grade to grade, (2) within the same SES group from grade to grade and between the two SES groups from grade to grade.



## CONCLUDING STATEMENT

Statistical analysis of the data obtained for the study revealed that there was no significant difference between the scores obtained on the Proverbs Test by children of low SES and children of high SES. This indicates that there is no significant relationship between SES and grade six children's ability to interpret proverbs. However, the informal analysis of the study data revealed that though the difference in achievement performance on the test between the two groups was not statistically significant, in terms of percentage distribution, the difference did provoke questioning. Subsequent investigation revealed interesting information.

Literature pertinent to proverbs referred to the proverb as an instrument of those people who, in most societal structures, are relegated to a position at the base of that structure by the leadership, which generally is the middle and upper-class members. The proverb has also been claimed to play a major role in the transition of a civilization's development from the pre-literate to the literate period, a period that parallels, to a degree, the position held in today's very literate society by the members of low SES. These two suggestions might serve as a plausible explanation for the successful achievement performance of the low SES group on the proverbs test.

An alternative explanation, and one which holds more import for the education, is the suggestion that some children develop a manner of engaging in abstract language which relies on concrete referents. However, because a significant relationship was





obtained between SES and intelligence, it is not possible to suggest, without further investigation, whether the development of this particular way of working with abstraction is more a function of SES or intelligence.



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## A P P E N D I X





test, is a proverb that contains a special meaning. Although the statement is true, we are looking for its special meaning; that is, people who break rules usually do so when the authorities are not around." In Sample A the answer sentence that means the same or about the same as this is ... "When the teacher is out of the room, things will be done that shouldn't be done."

Now look at Sample B. Which one of the four answers given has the same or nearly the same special meaning as the proverb?

#### POSSIBILITIES

1. If the students answer A or D say ... "No! A (or D) is not the correct answer. Try again."
2. If the students answer C say ... "Answer C is one of the correct answers, but it does not contain the special meaning that is in the proverb. So! you would receive only one point for having selected this answer."
3. If the students answer B say ... "Answer B is one of the correct answers and it is the best answer since it contains the same or nearly the same special meaning as the proverb. For this answer you would receive two points."

For the thirty proverbs in this test you are to select, from the four answers provided each proverb, the one that you think has the same or nearly the same special meaning as is in the proverb and mark the space on your answer sheet that has the same letter as the answer you select.

This test is not timed so relax and do the best you are able.



## Miller's Reading-Proverbs Test

In each question you are to pick only one answer: The one that has the same or nearly the same special meaning as is in the proverb. You are to fill in the space on the answer sheet that has the same letter as is in front of the answer you choose. You are not to write or mark on this booklet. Now follow the directions given to you by the teacher.

Sample A

WHEN THE CAT'S AWAY, THE MICE WILL PLAY.

- (A) Mice like to play all the time.
- (B) The mice will play when they are not being watched by the cat.
- (C) Rules are never broken when those who make the rules are not around.
- (D) You usually do things you shouldn't when those in authority are gone.

Sample B

MAKE HAY WHILE THE SUN SHINES.

- (A) Farmers like to feed their cattle hay in sunny weather.
- (B) You should always do things when the time is best.
- (C) Farmers like clear sunny weather to cut their hay.
- (D) Don't do things until you feel like doing them.





## 1. DO NOT COUNT YOUR CHICKENS BEFORE THEY HATCH.

- (A) Every egg hatches into a chicken.
- (B) Always plan on getting what you think is coming to you.
- (C) If you have ten eggs you may not hatch ten chickens.
- (D) Don't depend on receiving anything until you get it.

## 2. DON'T CRY OVER SPILT MILK.

- (A) It doesn't do you any good to worry about things that have already happened.
- (B) Always cry when you spill milk.
- (C) You shouldn't cry when you spill milk.
- (D) Never stop worrying about the past.

## 3. WHAT HE SAYS SHOULD BE TAKEN WITH A GRAIN OF SALT.

- (A) When he says something, you should eat salt as he talks.
- (B) A person shouldn't believe everything he is told.
- (C) People should be accepted as they are without question.
- (D) While he is talking, the salt shouldn't be taken.

## 4. THE EARLY BIRD CATCHES THE WORM.

- (A) The morning is a poor time for birds to catch worms.
- (B) Worms appear early in the morning so that is the best time for birds to find them.
- (C) Being first does not mean you will get the best.
- (D) Those who come first get the best.



5. DON'T CROSS THE BRIDGE UNTIL YOU GET TO IT.

- (A) It is easy to cross a bridge before getting to it.
- (B) Don't be concerned about things until you need to be.
- (C) You can't cross a bridge until you reach it.
- (D) A person should always worry about future events.

6. KILL THE GOOSE THAT LAID THE GOLDEN EGG.

- (A) People never take advantage of a good thing.
- (B) Because of their greed for more, they lost what they already had gained.
- (C) The goose that laid the golden egg was killed.
- (D) Farmers keep the goose that laid the most eggs.

7. MONEY BURNS A HOLE IN HIS POCKET.

- (A) When you have money in your pocket, it's difficult to pass by a store without spending it.
- (B) There are more people who save money than spend it.
- (C) Some people never seem to be able to make things last.
- (D) It isn't hard to keep something for a long time.

8. A ROLLING STONE GATHERS NO MOSS.

- (A) When a stone rolls down the hill nothing can stick to it.
- (B) Those who move around are successful.
- (C) People who don't stick to a thing seldom get that thing done.
- (D) Only rolling stones collect moss.

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- (D) Only rolling stones collect moss.

9. LET THE CAT OUT OF THE BAG.
- (A) She opened the bag and allowed the cat to escape.
  - (B) The kittens were put into a sack for the trip.
  - (C) They didn't tell anyone what they knew.
  - (D) The information was revealed before it should have been.
10. TO HAVE BATS IN THE BELFRY.
- (A) They behaved as though nothing was wrong.
  - (B) The bell made too much noise for most bats to stay there.
  - (C) To act as though they were peculiar.
  - (D) The bats liked to live near the bell in the belfry.
11. ONCE BITTEN TWICE SHY.
- (A) We usually go back again to things that fool or hurt us the first time.
  - (B) A person who is bitten once by a dog won't be afraid of it the next time.
  - (C) If a dog bites once, think twice about playing with it again.
  - (D) A person who has been fooled or hurt once is more careful the next time.
12. IT NEVER RAINS BUT IT POURS.
- (A) During a rain the rain comes down lightly.
  - (B) When it rains the rain comes down heavy.
  - (C) When one thing happens, many other things happen at the same time.
  - (D) Only one thing takes place at a time.





13. A MISS IS AS GOOD AS A MILE.

- (A) To miss the bus by one yard is the same as missing it by one mile.
- (B) It is better to miss the bus by one block than by two blocks.
- (C) The important thing is to come close to winning.
- (D) Almost winning doesn't get you the best prize.

14. AS PLAIN AS THE NOSE ON YOUR FACE.

- (A) It's as obvious as though it were right in front of you.
- (B) You can't help but see the nose when looking at someone's face.
- (C) People don't see the nose when they look at someone's face.
- (D) No matter how close you come to something it won't be easy to see.

15. HE LIKES BEING IN THE LIMELIGHT.

- (A) A person likes being the centre of attention.
- (B) He doesn't like bright lights because they are hard on his eyes.
- (C) He always wants to be in the light.
- (D) Most people do not want others to pay attention to them.

16. NECESSITY IS THE MOTHER OF INVENTION.

- (A) Invention's mother is called Necessity.
- (B) When you want to do something bad enough a way can be found to do it.



- (C) When children need something, they usually ask their mother to get it for them.
  - (D) If anything you need to do is difficult, don't try to do it.
17. SHE CAN'T SEE FARTHER THAN THE END OF HER NOSE.
- (A) A person shouldn't bother making plans for the future.
  - (B) She can see things at a distance because of her eyesight.
  - (C) Many people do not look and plan ahead.
  - (D) She has bad eyesight and she can't see things that are far from her.
18. TO LOOK FOR A NEEDLE IN THE HAYSTACK.
- (A) Things that are lost among other things that look alike are easy to find.
  - (B) A needle would be hard to find in a haystack.
  - (C) A needle that looks like a piece of hay would be easy to find if lost in a haystack.
  - (D) A thing is difficult to find when it is lost among other things that are similar.
19. TO TAKE THE BULL BY THE HORNS.
- (A) If something needs to be done, do it right away.
  - (B) To throw a bull to the ground you have to take hold of him by the horns.
  - (C) You can't take a bull by the horns because he doesn't have any.
  - (D) You should always wait awhile before doing a task.





## 20. EASY COME, EASY GO.

- (A) He spent all the money because he didn't have to work for it.
- (B) The easier it is to get things, the more you appreciate them.
- (C) The easier it is to earn money the harder it is to spend.
- (D) You appreciate things more if you've worked hard for them.

## 21. BEAUTY IS BUT SKIN DEEP.

- (A) A potato that has a smooth skin is not rotten on the inside.
- (B) An orange with a nice skin may be bad inside.
- (C) Anything that looks nice on the outside doesn't have to be nice inside.
- (D) Beautiful things are usually not good on the inside.

## 22. HE WAS LED BY THE NOSE.

- (A) During the game he was led around by the nose.
- (B) Most individuals never do what they are told.
- (C) He wouldn't let them lead him by the nose.
- (D) There are some people who do what anyone tells them to.

## 23. KILL TWO BIRDS WITH ONE STONE.

- (A) Do as many things at one time as possible.
- (B) You should do only one thing at a time.



- (C) When throwing a stone always try and kill more than one bird with the same stone.
  - (D) Hunters try to shoot only one duck at a time.
24. DON'T MAKE A MOUNTAIN OUT OF A MOLE-HILL.
- (A) You should worry about big things the same as little ones.
  - (B) Don't be so concerned with small things that you make them big ones.
  - (C) It is easy to make a small hill into a big one.
  - (D) You shouldn't make a big hill out of a small one.
25. THE PROOF OF THE PUDDING IS IN THE EATING.
- (A) You can't be sure how good something is until you have used it.
  - (B) You don't have to use a thing to know it is good.
  - (C) If a pudding is good to eat it was made well.
  - (D) You don't have to eat the pudding to tell how good it is.
26. ONE MUST DRAW THE LINE SOMEWHERE.
- (A) You have to draw the line somewhere so do it on the blackboard.
  - (B) Everyone was permitted to do what they wanted to.
  - (C) You can't let people do whatever they want to.
  - (D) It doesn't matter where you put the line.



27. NEVER LOOK A GIFT HORSE IN THE MOUTH.

- (A) If something is given to you, don't accept it unless it is useful.
- (B) If you get a horse as a gift, you shouldn't look in its mouth.
- (C) A person shouldn't question the importance of things given by others.
- (D) Before you accept a horse as a gift, be sure to examine its mouth.

28. HE COMPLETELY TOOK THE WIND OUT OF MY SAILS.

- (A) When his boat got in our way, his sail kept the wind from our sails.
- (B) He wasn't able to catch us with his boat.
- (C) His action took me by surprise.
- (D) Most people are ready for anything that might happen.

29. BARKING DOGS SELDOM BITE.

- (A) The quietest people say the most.
- (B) People should be afraid of dogs biting when they are barking.
- (C) Those who make the most noise usually get the least done.
- (D) Dogs can't bite while they are barking.

30. A CHIP OFF THE OLD BLOCK.

- (A) Young children are not like their parents.
- (B) Young children are like their parents.
- (C) A big block of wood is made from small splinters.





- (D) A splinter of wood comes from a bigger and old piece of wood.













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